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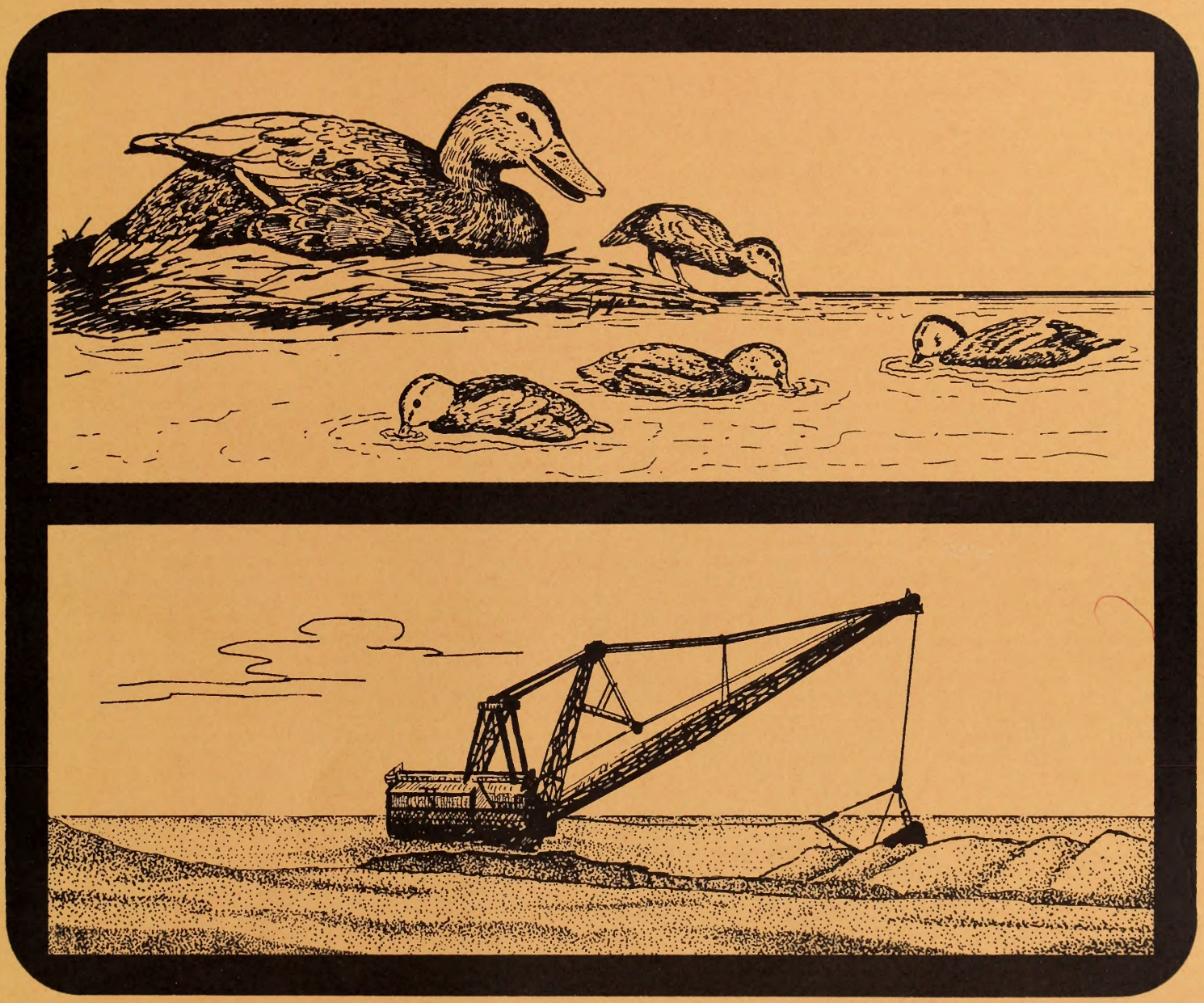
McKenzie-Williams Management Framework Plan



June 1983

United States Department of the Interior
Bureau of Land Management
Dickinson District Office, North Dakota

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1983

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Dickinson District Office
P.O. Box 1229
Dickinson, ND 58602

HD
242.3
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1983

Dear Citizen:

The Bureau of Land Management (BLM), Dickinson District, is preparing a management framework plan (MFP) for McKenzie and Williams counties and for a portion of southern Divide County. This plan will guide the management of federal split-estate minerals and certain federal surface lands.

Please review the land use recommendations that are contained in the present document. To help the public understand these recommendations, our staff will hold two open-house meetings, two hours in length, on July 25 at the following locations:

Watford City—City Hall—1:30 p.m. CDT
Williston—Memorial Room, Williams Co. Courthouse—7:30 p.m. CDT

We invite you to attend one of these meetings. The open-house approach will allow you to stop by when it is most convenient for you, and you will not have to sit through long presentations that may not interest you. Several of the resource specialists who worked on the McKenzie-Williams MFP will be present at the meetings to answer your questions.

The open-house meetings will not serve as forums for persons wishing to offer oral testimony on the MFP. A separate hearing for persons who feel they may be adversely affected by the implementation of the MFP recommendations will be held August 16 in Williston in the Memorial Room of the County Courthouse beginning at 7:30 p.m. However, at any time prior to the close of the comment period written comments on the McKenzie-Williams MFP may be submitted to our office at P.O. Box 1229, Dickinson, ND 58602. The comment period for these recommendations ends August 19, 1983.

A separate comment opportunity is being offered for land base adjustment. Should you want to recommend specific ways that the BLM could adjust its surface land holdings in the area—either through sale, exchange, or transfer—please contact this office, and we will mail you a response form for land base adjustment.

If you wish to know more about the MFP recommendations and are unable to attend either of our meetings, please write to us or call us at (701) 225-9148. We also encourage you to visit our office, which is located on the Second Floor of the Gate City Building, 204 Sims Street, Dickinson.

Sincerely yours,

Reed L. Smith

Reed L. Smith
District Manager

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INTRODUCTION

PURPOSE AND SCOPE OF THE MFP

This document contains land use recommendations for federal lands and resources in McKenzie and Williams counties and a portion of Divide County. Public review of these recommendations is a key step in the preparation of the McKenzie-Williams Management Framework Plan (MFP). The Dickinson District Office of the Bureau of Land Management began work on this plan in April 1981 and will complete it by October 1983. The plan will guide the future management of federal coal, oil and gas, and certain federal lands.

The primary reason for preparing the McKenzie-Williams MFP is to explore the possibility of leasing federal coal. In terms of acres involved and the potential impacts of implementing the land use decisions, lignite coal is the most significant federal resource in the planning area. Before the federal coal can be made available for leasing, a series of complex procedures must be accomplished. These procedures are described in the federal coal management regulations published in the *Federal Register* on July 19, 1979 (revised regulations published July 30, 1982). One such procedure is preparing a comprehensive land use plan. The McKenzie-Williams MFP fulfills the requirements for this type of plan.

It is important to recognize that this MFP is not a land use plan for private, state, or other (non-BLM) federal agency resources. In the McKenzie-Williams planning area federal mineral ownership is primarily split-estate (see Appendix A). In this situation the BLM administers part or all of the mineral estate but has no jurisdiction over the surface estate. Because the BLM does not manage the surface over these federal minerals, the MFP does not contain decisions for use of the surface per se.

Federal split-estate mineral acres are not consolidated neatly in the McKenzie-Williams planning area. The federal mineral ownership is mixed in with non-federal minerals in a checkerboard pattern, or—where there is a low percentage of federal minerals—there is no pattern at all.

The surface lands administered by the BLM in the planning area are widely scattered, and management decisions are constrained by the limitations of small size (in terms of contiguous acres) and/or poor access. In the MFP these lands will be referred to as "scattered tracts."

BACKGROUND

The Bureau of Land Management is responsible for the administration and management of millions of acres of federally owned lands and resources, primarily in the western states and Alaska. Most of these public lands include both the surface and subsurface rights; however, the BLM also administers federal mineral reservations that underlie private, state, or other federal agency ownership.

In North Dakota, the BLM administers approximately 5.9 million acres of split-estate mineral reservations and 68,000 acres of surface lands (both surface and subsurface rights).

The BLM surface lands in the State are mostly small scattered parcels. There are only two areas in North Dakota where BLM surface lands form somewhat consolidated blocks: in western Bowman County and northwestern Dunn County. The latter is known as the Lost Bridge Management Area and is included in the West-Central North Dakota Management Framework Plan. The former is known as the Big Gumbo Management Area and is included in the Southwest North Dakota MFP, prepared concurrently with the McKenzie-Williams MFP (see Map 1 in envelope on back cover).

OVERVIEW OF THE AREA

The McKenzie-Williams Planning Area is in the northwestern corner of North Dakota, bounded on the west by Montana. Along with McKenzie and Williams counties, five southwestern townships of Divide County adjacent to the northern boundary of Williams County are included. These townships were added to include the portion of the Hanks Coal Deposit that extends across the county line and to include four parcels of BLM surface land in these townships.

A wide variety of topographic features can be found in the area, varying from rough badlands in southern McKenzie County to the glaciated prairie pothole region in northern Williams County and southern Divide County. The major waterways are the Missouri, Yellowstone, and Little Missouri rivers.

The populations of the two counties are predominately rural, but the urban areas have grown rapidly in the last few years due to oil and gas development. The larger population centers are Williston (13,336), Watford City (2,119), Tioga (1,597), and Ray (766). The county populations are: McKenzie County, 7,132; and Williams County, 22,237. (All figures are from the 1980 census.)

The major industries in the area are oil and gas and agriculture, mostly in the form of dryland crops and livestock. There is some irrigated farming along the Yellowstone and Missouri rivers.

Williams County has had producing oil wells since the early 1950s. Since then, the oil and gas activity has spread over a larger portion of the planning area.

Coal has been mined in the planning area since homesteading days. Most of the early mines produced very small amounts of coal for local home heating use. These mines were operated by farmers and local businessmen and included both surface and underground operations. Most of the small surface mines and all of the underground mines were closed by the early 1960's. Underground mining in North Dakota is uneconomical and impractical because of such factors as federal safety regulations, overburden type, and mining costs. The only active coal mine in the area is operated by Geo Resources Exploration, Inc., which produces leonardite, an oxidized form of lignite, from a small surface mine near Williston.

BLM management responsibility varies throughout the area. For planning purposes there are three major categories of BLM jurisdiction: coal, 1,050,687 acres; oil and gas, 32,058 acres; and surface lands (scattered tracts), 3,310 acres. The mineral acreages are for federal split-estate ownership. In North Dakota the BLM does not administer any public lands with nonfederal minerals; therefore, the surface acreage should be added to each of the mineral acreages to show total BLM mineral jurisdiction in the planning area.

Throughout the planning area, federal coal is scattered among privately owned coal. Some of this federal coal has been reserved along with all other minerals, some has been reserved with one or more other minerals (such as oil and gas), and in other tracts coal is the only mineral reserved to the government. Four hundred acres of federal coal near Williston has already been leased to industry by the BLM. The federal coal under consideration in this MFP is located in five deposits known to have a high to moderate potential for development by surface mining (see Map 2).

As with coal, the federal oil and gas occurs in three basic categories: alone, with one or more other minerals, or all minerals reserved. Most of the federal oil and gas in the planning area is under lease, but only a small percentage of the leased areas ever reaches the point of test well or production development. This percentage is increasing, however. The leased areas that are not developed are reexamined for lease renewal every ten years.

In McKenzie County, there is a large amount of land administered by the U.S. Forest Service (USFS). As the leasing agent for all federal minerals, the BLM actually issues any leases for minerals within USFS boundaries. However, since the USFS has the surface management responsibility and mineral development affects the surface environment, the USFS will prepare the land use plan for federal coal within USFS administrative boundaries (see Map 2), including split-estate mineral ownership (per 1980 Memorandum of Understanding between the Departments of Agriculture and Interior). The USFS also has planning responsibility for all federal oil and gas under surface lands administered by the USFS within the Little Missouri National Grassland.

PLANNING PROCESS OVERVIEW

Land use planning for the McKenzie-Williams MFP consists of seven basic steps, which are summarized below. We are now at Step 6. Each of these steps requires the use of an interdisciplinary team.

STEP 1:	Identification of Issues (see Appendix B)
Issues	The public is asked to help identify issues relating to BLM management in the area. Later steps will be guided by the issues that have been identified.
STEP 2:	Development of Planning Criteria (see Appendix B)
Criteria	Criteria are prepared to guide the development of the plan, and to ensure that the plan will be tailored to the issues previously identified. The criteria also help prevent unnecessary data collection and analysis.
STEP 3:	Inventory Data Collection
Inventory	This includes the gathering of resource, environmental, social, and economic data needed to prepare the plan.

HANKS
WILLIAMS
SAND CREEK
WILLISTON
TOBACCO GARDEN
KEENE
BENNIE PEER
McKENZIE
FORT BERTHOLD INDIAN RESERVATION
THEODORE ROOSEVELT NATIONAL MEMORIAL PARK (NORTH UNIT)
LAKE ZAHL NATIONAL WILDLIFE REFUGE
15TH GUIDE MERIDIAN
14TH GUIDE MERIDIAN
13TH STANDARD PARALLEL
12TH STANDARD PARALLEL
14TH STANDARD
Williston
Watford City
Keene
Ray
Tioga
Temple
Wheelock
Epping
Spring Brook
Charlson
Banks
Buford
Alexander
Rawson
Arnegard
Charbonneau
Cartwright
East Fairview
Powers
Powers Lake
Lunds Valley
Fish Lake
Cotton
White Earth
Manitou
Ross
Wildrose
Hamlet
McGregor
Battleview
Corinth
Alamo
Grenora
Hanks
Zahl
Lake Zahl
Coulee
Bonetraill
Noonan
Appam
Smoky Butte
Chimney Butte
Demicks Lake
Fency Buttes
Blue Buttes
Croff
Mandaree
Stocke Butte
Sheep Butte
Mormon Butte
Lone Butte
Grassy Butte
Trotters
Sperati Point
Tepee Buttes
Missouri River
Yellowstone River
Little Muddy River
Muddy River
East Fork
White Earth River
Timber Creek
Tobacco Garden Creek
Clear Creek
Charbonneau Creek
Antelope Creek
Spring Creek
Cherry Creek
Elkhorn Cr
Red Wing Cr
Pierre Creek
Bicycle Sand Cr
Cinnamon Cr
Bennett Creek
Dry Creek
Little Muddy Creek
Willow Creek
Cottonwood Pass
Camp Cr
Sand Creek
Little Beaver Creek
Big Beaver Creek
Deep Cr
Oliver Creek
Rough Creek
Magpie Cr
McKENZIE-WILLIAMS PLANNING AREA
BLM Planning Area Boundary
Coal Deposit
Forest Service Administrative Boundary
N
0 5 10 15 Miles
0 5 10 15 20 25 Kilometers

STEP 4:	Analysis of the Current Situation
Analysis	Information on the human and natural resources within the planning area is organized and analyzed, with particular emphasis on BLM-administered resources.*
STEP 5:	Resource Staff Recommendations
In-house Recommendations	BLM resource specialists (such as geologists, and wildlife biologists) recommend to the District Manager how the public lands and minerals should be managed.
STEP 6:	District Recommendations
Publication of Recommendations	After reviewing the resource staff recommendations, the District Manager develops the official land use recommendations for the District. These recommendations are published for public review.
STEP 7:	Land Use Decisions
Decision	After evaluation of public comments, the plan is modified where necessary and adopted, and the land use decisions are published.

*This information is contained in various District planning documents which are available for public inspection at the Dickinson District Office.

Most major planning issues identified through our scoping efforts are related to coal mining and are addressed in the plan. Other coal-related concerns will be addressed at the next level of planning, known as "activity planning." During activity planning these issues will be assessed in more detail, after potential leasing tracts have been identified.

New legislation and policies changed the planning approach of the Bureau from an MFP format to what is now called a resource management plan (RMP). During the planning "transition" the McKenzie-Williams MFP was initiated.

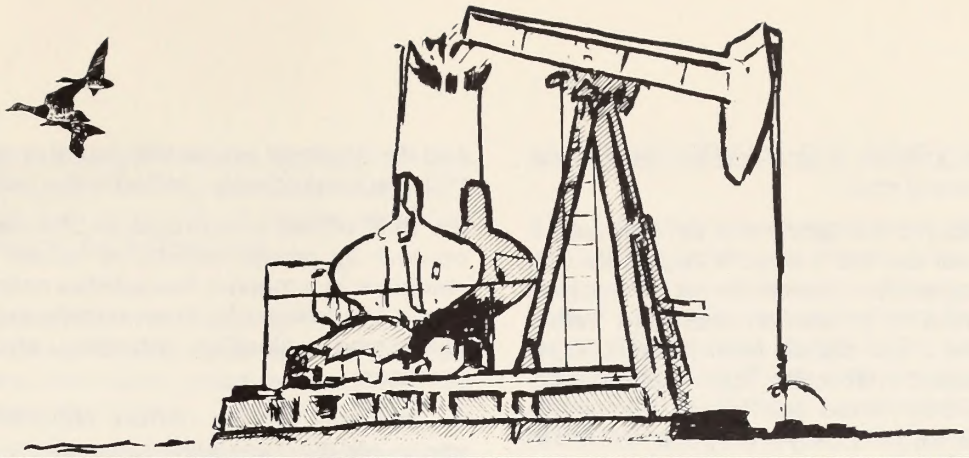
An RMP integrates an environmental assessment of the potential impacts associated with a range of land use plan alternatives. The RMP is the product of an "issue-driven" planning process. Issue-driven planning means that only those aspects of current management direction that are felt to be issues are examined through the formulation and evaluation of alternative management actions.

The McKenzie-Williams MFP incorporated elements of the RMP approach in that this planning effort was issue-driven. Public comments obtained through public meetings and brochures were used in the issue identification process. A number of energy-related and land management issues were identified, based on the judgment of the planning team, interagency consultation, and District Manager review.

The direction to resolve issues in certain ways was provided by the Dickinson District Manager, based on existing policy, public desires, and resource capabilities. In addition, planning criteria were developed to guide the resolution of issues (see Appendix B). Impact assessments developed for major coal planning issues such as agriculture are contained in other planning documents which are available for public review at the Dickinson District Office.

DOCUMENT FORMAT

The recommendations for the McKenzie-Williams MFP are presented in two basic categories, split-estate minerals and scattered tracts. These categories are further divided into specific BLM programs, such as coal and grazing. Preceding the recommendations, the overall objectives for the program are summarized. Each recommendation is followed by the rationale.



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FEDERAL SPLIT-ESTATE MINERALS

COAL

Background

For planning purposes the federal coal lands in the McKenzie-Williams area are considered separately, by deposit. The deposits are defined by the boundaries of federal coal known to have a high to moderate potential for development by surface mining (see Appendix C). If an area has not been drilled (explored) for coal potential—or drilling information is not available to the BLM—that area could not be included in the MFP planning process. Coal mining potential constitutes the first screen used in analyzing federal coal lands.

The BLM uses four other screens to determine which coal lands should not be considered further for possible leasing. The areas not excluded constitute the areas acceptable for further consideration during "activity planning." Within these acceptable areas, preliminary leasing tracts will be delineated for site-specific analysis. The four screens are addressed separately in the following general discussion and in the recommendations for each coal deposit.

I. Unsuitability Criteria

The twenty unsuitability criteria (see Appendix D) address a wide range of ecological and cultural features. If no exception to the criterion (mitigating measure) is possible, the affected lands are excluded from further consideration for coal leasing. The approach to be used in making the final decisions on exceptions will be based on conservation and economic efficiency. Mining should occur in a manner that will allow for the achievement of highest economic efficiency, greatest recovery of the coal resource (conservation), and minimal environmental damage. This goal can be acheived by applying mitigating measures (exceptions) where allowable, acceptable, and feasible.

In some unsuitable areas the application of exceptions to the criteria could not be addressed. It was too early in the process. Some exceptions can only be applied at either tract selection time or mining permitting time (or at both times), when more site-specific studies and analyses are possible.

II. Resource Trade-offs

The unsuitability criteria do not address all potential resource values that may be found in federal coal lands. All of the coal deposits were analyzed to see if there were any areas with unique, site-specific resources warranting protection by the resource trade-offs screen. In applying this screen the value of mining the coal must be balanced against the value of the resource affected.

III. Surface Owner Consultation

Letters were sent to persons owning the surface over federal coal in the identified deposits. They were asked their views (for, against, or undecided) regarding development of the federal coal under their land. If a significant number of landowners in an area was opposed to leasing the federal coal under their surface lands, the area was excluded (see Appendix E).

As a preliminary step in analyzing opposition, it must be determined if there is enough federal coal in an area (or if there is a particular distribution pattern) to control eventual development. If federal coal is not a controlling factor in an area, a determination of "significant numbers of landowners opposed" would not be meaningful.

The following are considered in determining if there is a significant number of landowners opposed.

1. Actual number of those opposed to leasing;
2. Acreage included under "opposed;"
3. Percentage of federal coal in the total area;
4. Distribution pattern of federal coal;
5. Distribution pattern of "opposed" comments;
6. Location and number of existing federal leases;
7. Location and number of preference right leases;
8. Number and location of private and state coal leases;

9. Number and location of surface lease agreements on lands over federal coal.

Also to be considered is ongoing coal development, if any, in a particular deposit. If there is large-scale coal mining in an area, results of surface owner consultation could not be used to exclude an area from further consideration, for it has already been included in an active mining area; therefore, surface owner consultation could have only limited significance. If mining is occurring in an area, it is usually in the public interest to lease the federal coal (barring the presence of environmental or other problems). Not leasing the federal coal would result in by-pass; that is, the federal coal might become an unmined island. Once by-passed, it would probably never be mined.

Even if an area is not excluded from further consideration as a result of surface owner consultation, landowners can still prevent the federal coal under their land from being leased. Landowners who qualify under the criteria of Public Law 95-87, Section 714—and who have not previously granted consent for mining—may prevent leasing simply by not giving consent (see Appendix E). Evidence of consent is not needed until shortly before the actual leasing would occur.

IV. Consistency With Other Land Use Plans

In land use planning and resource actions, the BLM strives to be as consistent as possible with plans of local, tribal, county, state, and other federal agencies. During preparation of the McKenzie-Williams MFP, some federal coal lands were excluded from further consideration for leasing on the basis of plan consistency.

COAL OBJECTIVES

The overall objectives of the BLM coal program are to: make federal coal resources available to meet present and future market demand; assure that mineral exploration, development, and extraction are carried out in such a way as to minimize environmental damage; receive fair market value for minerals subject to lease; and to provide for orderly and timely development of the resource.

The "Mining and Minerals Policy Act of 1970" declares it to be the policy of the federal government to encourage the development of the domestic minerals industry. In addition, the 1980 National Minerals and Minerals Policy, Research and Development Act restates the need to implement the 1970 act.

The current BLM minerals policy statement mandates, in part:

1. Except for Congressional withdrawals, public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest.

2. BLM actively encourages and facilitates the development by private industry of public land mineral resources in a manner that satisfies national and local needs and provides for economically and environmentally sound exploration, extraction, and reclamation practices.

3. BLM will process mineral applications, permits, leases, and other use authorizations for public lands in a timely and efficient manner.

4. BLM's land use plans and multiple-use management decisions will recognize that mineral exploration and development can occur concurrently or sequentially with other resource uses. The Bureau further recognizes that land use planning is a dynamic process, and decisions will be updated as new data are evaluated.

ALL COAL DEPOSITS

General Recommendations

Recommendation: Issue licenses to mine coal to qualified applicants within those areas designated acceptable for further consideration for leasing. Each application will be assessed on its individual merits.

Rationale: As other energy supplies become more scarce, the demand for coal through licenses could increase. Such licenses are specifically authorized in Section 8 of the Minerals Leasing Act of 1920. They are strictly to provide for local domestic need for coal. Under the provisions of the regulations individuals or associations of individuals are allowed to mine federal coal for their own use. A license to mine may be issued to a municipality solely for the nonprofit mining and disposal of coal to its own residents. The Bureau may also authorize a recognized and established relief agency of any state to take federally owned coal within the state and provide it to families on its rolls who require the coal for household use but are unable to pay for the coal. These licenses do not require the payment of rentals or royalities. Any mining activities authorized by a license are subject to the Surface Mining Control and Reclamation Act.

Recommendation: Leave all federal coal lands in this planning area open for potential coal exploration. However, applications will be assessed and evaluated on a case-by-case basis. These specific evaluations will determine whether or not to allow exploration to occur and what mitigation should be required as a condition for issuing the coal exploration license.

Rationale: All of the area has not been adequately explored to determine the exact nature and quality of the coal resources. This information is a vital part of

overall energy planning in the area, and only through exploration programs can we obtain that information. The exploration can occur without causing significant adverse impacts to the environment.

Recommendation: Maintain up-to-date lignite deposit boundaries as new information is acquired. Assess the new information periodically and revise the land use plan as appropriate.

Rationale: Planning is never totally complete until all resource information is available and has been analyzed. New data could require significant changes in the plan.

Recommendation: Proposed exchanges will be evaluated on a case-by-case basis.

Rationale: Exchanges may allow for improvements in the management of federal coal.

APPLICATION OF SCREENS

The following recommendations address the four exclusion screens discussed earlier. These recommendations are grouped according to coal deposit and type of screen. Deposit maps depict the effects of applying specific screens, as well as the cumulative effects. Tables following the recommendations for each deposit show the effects of screen application in terms of acreage and coal tonnage. In the Summary section, the results of the screening process for all coal deposits are summarized.

Extensive oil and gas conflicts throughout the Keene Deposit have resulted in a recommendation to defer leasing of the federal coal resources. As a result the coal exclusion screens were not applied there.

KEENE DEPOSIT

Recommendation: Defer leasing the federal coal resources in the Keene Deposit (see Map 2) until development of the coal resource is no longer in conflict with oil and/or gas production. Reconsider coal leasing as oil and gas operations are completed.

Rationale: Development of the Keene Deposit at this time might jeopardize a large portion of North Dakota's oil production. Current policy directs that development of the coal resource be deferred where significant oil and/or gas production would be lost if coal mining were permitted.

The Keene Deposit is located along the crest of the Nesson Anticline, which is one of the two largest geologic structures in the Williston Basin. Oil has been produced from fields overlapping the deposit since 1953. Production has continued on a large scale to the present day. Fourteen producing oil fields and six known geologic structures (KGSs) at least partially overlap the deposit boundaries. Coal development in this deposit could jeopardize a major portion of the State's oil production. Production data for each field is shown in Table I.

TABLE I

OIL FIELDS AFFECTING THE KEENE DEPOSIT
(production in barrels)

Field	1981	1982	Cumulative*
Antelope	364,068	342,043	33,341,838
Bear Den	31,205	29,618	809,234
Berg	26,366	40,229	66,595
Blue Buttes	1,308,030	1,429,121	28,015,148
Camel Butte	30,364	43,577	737,807
Charlson	1,120,775	718,330	70,773,200
Clear Creek	155,471	146,430	7,913,651
Croff	21,276	20,241	910,053
Dimmick Lake	31,869	17,570	1,798,782
Hawkeye	122,138	85,695	12,993,045
Johnson Corner	6,588	11,587	18,175
Keene	89,177	154,939	2,452,650
Shing	28,430	21,143	1,433,789
Union Center	106,265	77,913	439,191
Statewide	45,707,000	47,481,324	689,271,393

*Cumulative production is through 1982.

Recommendation: All federal coal in this deposit is available for further consideration for leasing except for those lands excluded by the application of the following screens.

Rationale: The screening process described in the federal coal management regulations was applied to this coal deposit. Certain areas were excluded from further consideration for leasing upon the application of the required screens. Once these screens are applied and appropriate areas excluded, the remainder of the federal coal in the deposit is acceptable for further consideration for leasing.

Application of Screens: Recommendations

I. Unsuitability Criteria

General:

Recommendation: Do not exclude any federal coal lands from further consideration for leasing based on criteria numbers 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, and 20.

Rationale: The Hanks Deposit does not contain the resources or conditions addressed by these criteria.

Criterion 1: Federal Land Systems and Incorporated Cities, Towns, and Villages

Recommendation: Federal coal lands within the town of Hanks and the National Wildlife Refuge system are unsuitable under this criterion (see Map 3).

Rationale: Criterion 1 requires that these areas be designated unsuitable.

Criterion 3: Buffer Zones along Rights-Of-Way and Adjacent to Communities and Buildings

Recommendation: The following areas are unsuitable for mining: lands within 100 feet of the outside line of the rights-of-way of public roads; within 100 feet of cemeteries; and within 300 feet of occupied dwellings, schools, churches, community or institutional buildings, and public parks. The acreage of these areas was estimated in this plan (see Table II). However, these areas will be considered suitable pending further study during activity planning to determine more exact locations and to consider application of the exceptions and exemption through negotiations with affected entities and land owners in accordance with the Surface Mining Control and Reclamation Act (SMCRA).

Rationale: These areas are small, numerous, and randomly distributed throughout this deposit; therefore, applying this criterion at this time could have a significant effect on the locations of logical mining units. It is more practical to determine exceptions and negotiate exemptions as consideration passes through activity planning to application of stipulations during mine plan evaluation.

Criterion 7: Historic Land and Sites

Recommendation: No areas are excluded from further consideration for leasing at this time due to this criterion.

Rationale: No areas have been identified as being on or eligible for the National Register of Historic Places at this time; however, as further information is gathered at the activity planning and mine plan stages, additional areas could be identified as being unsuitable under this criterion.

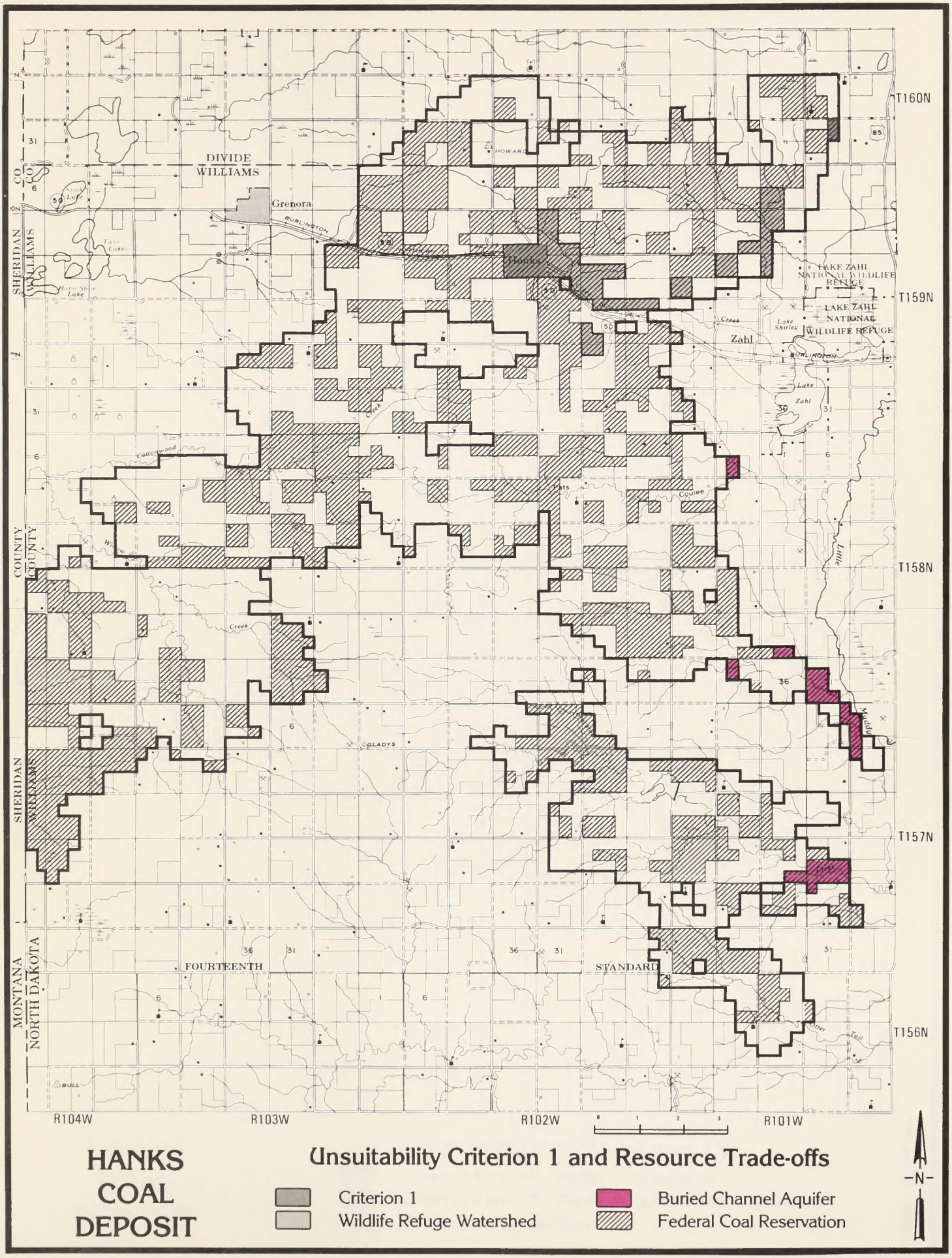
Criteria 14 and 15: High-Priority Habitat for Migratory Bird Species of High Federal Interest and Fish and Wildlife Habitat Essential for Resident Species of High Interest to the State.

Recommendation: Areas of high-priority habitat for migratory bird species of high federal interest and essential wildlife habitat for resident species of high interest to the State were identified through a habitat mapping process involving consultation with the U.S. Fish and Wildlife Service and North Dakota Game and Fish Department. Designate specific acreage unsuitable where it has been determined that these habitats cannot be mined without causing significant long-term adverse impacts to the wildlife species in question. Designate as suitable with stipulations high-priority or essential habitats where restoration or replacement will prevent significant long-term adverse impacts to such species. The lease stipulations should require that such habitats be restored or replaced as agreed upon by appropriate state and federal regulatory agencies. Areas identified as unsuitable and suitable with stipulations are mapped in detail on 1:24,000 scale maps available for public inspection at the Dickinson District Office. Map 4 shows an approximation of these areas.

Rationale: Criteria 14 and 15 were considered jointly because analysis for each criterion was based on the same habitat mapping products, and because the migratory bird species of high federal interest were also considered by the State of North Dakota as species of high interest. It has been determined that those areas identified as unsuitable cannot be mined without causing significant long-term adverse impacts to the wildlife species in question, but the areas identified as suitable with stipulations can be mined and restored or replaced without causing significant long-term adverse impacts. It is assumed that reasonable stipulations for habitat restoration or replacement will be agreed upon which will not preclude mining in the areas identified as suitable with stipulations.

II. Resource Trade-Offs

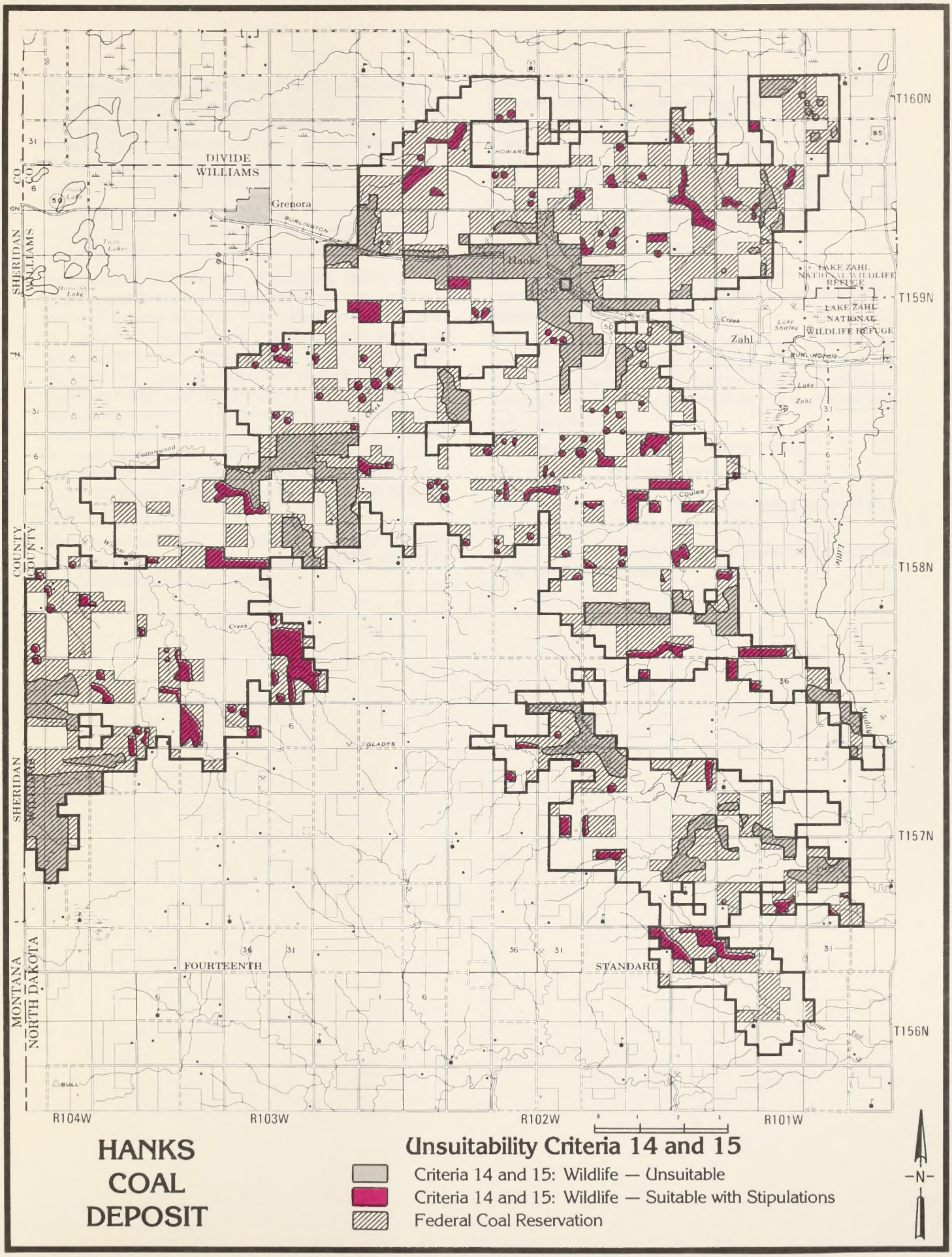
Recommendation: A portion of the watershed for the lake at Lake Zahl National Wildlife Refuge is unacceptable for further consideration for coal leasing (see Map 3).



HANKS COAL DEPOSIT

Unsuitability Criterion 1 and Resource Trade-offs

- Criterion 1
- Wildlife Refuge Watershed
- Buried Channel Aquifer
- Federal Coal Reservation



HANKS COAL DEPOSIT

Unsuitability Criteria 14 and 15

- Criteria 14 and 15: Wildlife — Unsuitable
- Criteria 14 and 15: Wildlife — Suitable with Stipulations
- Federal Coal Reservation

Rationale: Refuge lands are part of the federal lands system considered unsuitable under Criterion 1 of the unsuitability criteria discussed previously. At this refuge the lake is an integral part of the purpose of the refuge. The watershed area shown is necessary to maintain the quality and quantity of water in the lake.

Recommendation: Areas with high concentrations of steep slopes, as shown in Map 5, are unacceptable for further consideration for coal leasing.

Rationale: The breaks topography found in this coal deposit is a unique feature and has high aesthetic value to people living in North Dakota. The broken topography in these areas also limits the impact of agricultural disturbances, which enhances the opportunity for high-quality wildlife habitat. As a result of that, the areas are valuable for hunting. In order to assure the continued existence of these values and to satisfy state reclamation laws, the areas would have to be returned to rough topography if they were mined. It would be very difficult to reconstruct steep topography in high concentrations, because of problems with slope stability and mining economics.

Recommendation: Areas where buried channel aquifers occur (see Map 4) are unacceptable for further consideration for coal leasing.

Rationale: These buried channel aquifers are important water sources with high yields and very good quality. In most areas they are capable of being used as a water source for irrigation as well as domestic and livestock uses. The only source of replacement water with comparable quantity and quality for these areas is Lake Sakakawea. It would not be practical to replace this water source by a pipeline from the lake.

III. Surface Owner Consultation

Recommendation: Do not exclude any federal coal lands from further consideration for leasing on the basis of surface owner opposition.

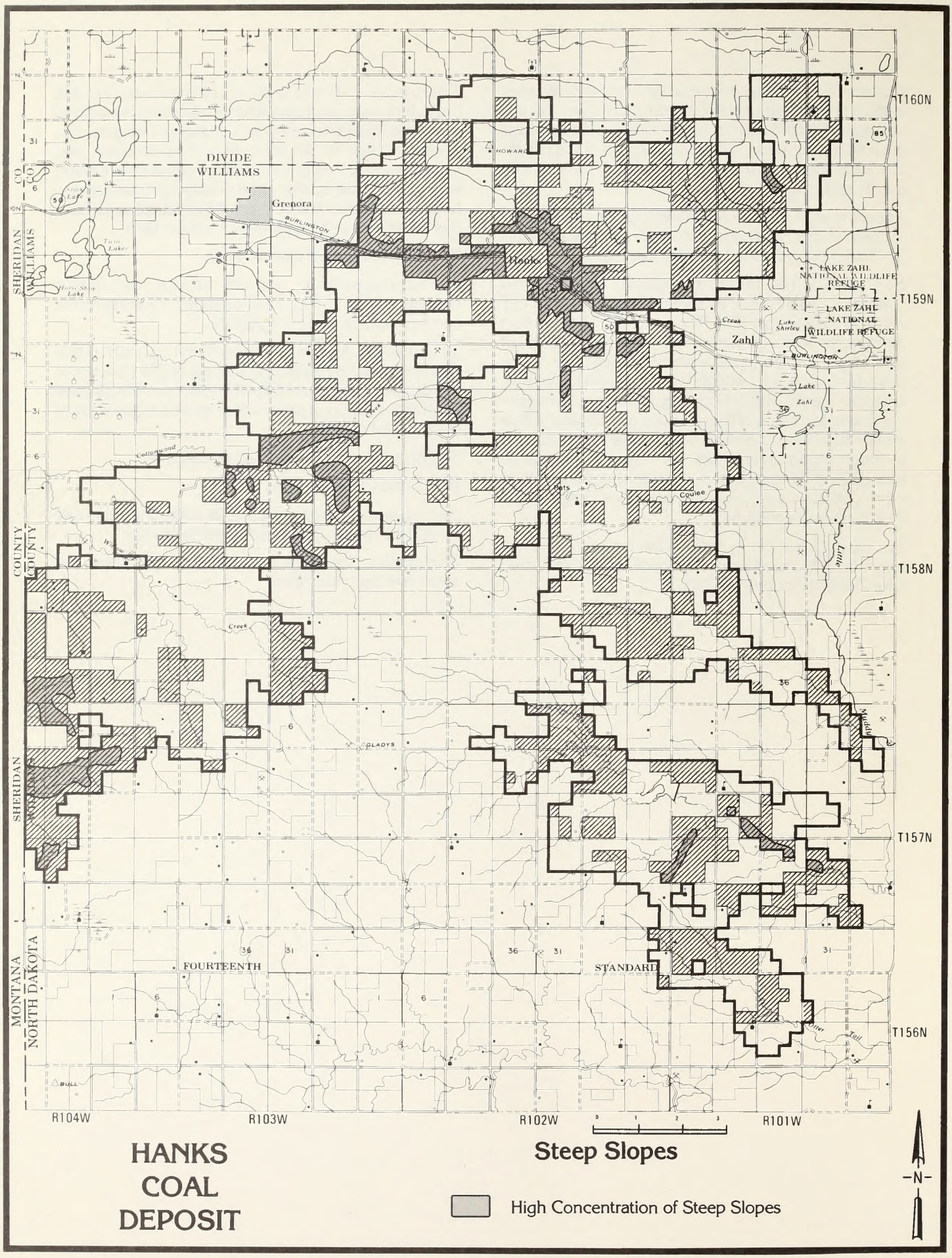
Rationale: As shown in Map 6, the opposition that was expressed is relatively scattered, and in portions of the deposit there is considerable evidence of coal leasing (leases covering private coal as well as the surface over federal coal).

See Appendix F for consultation statistics.

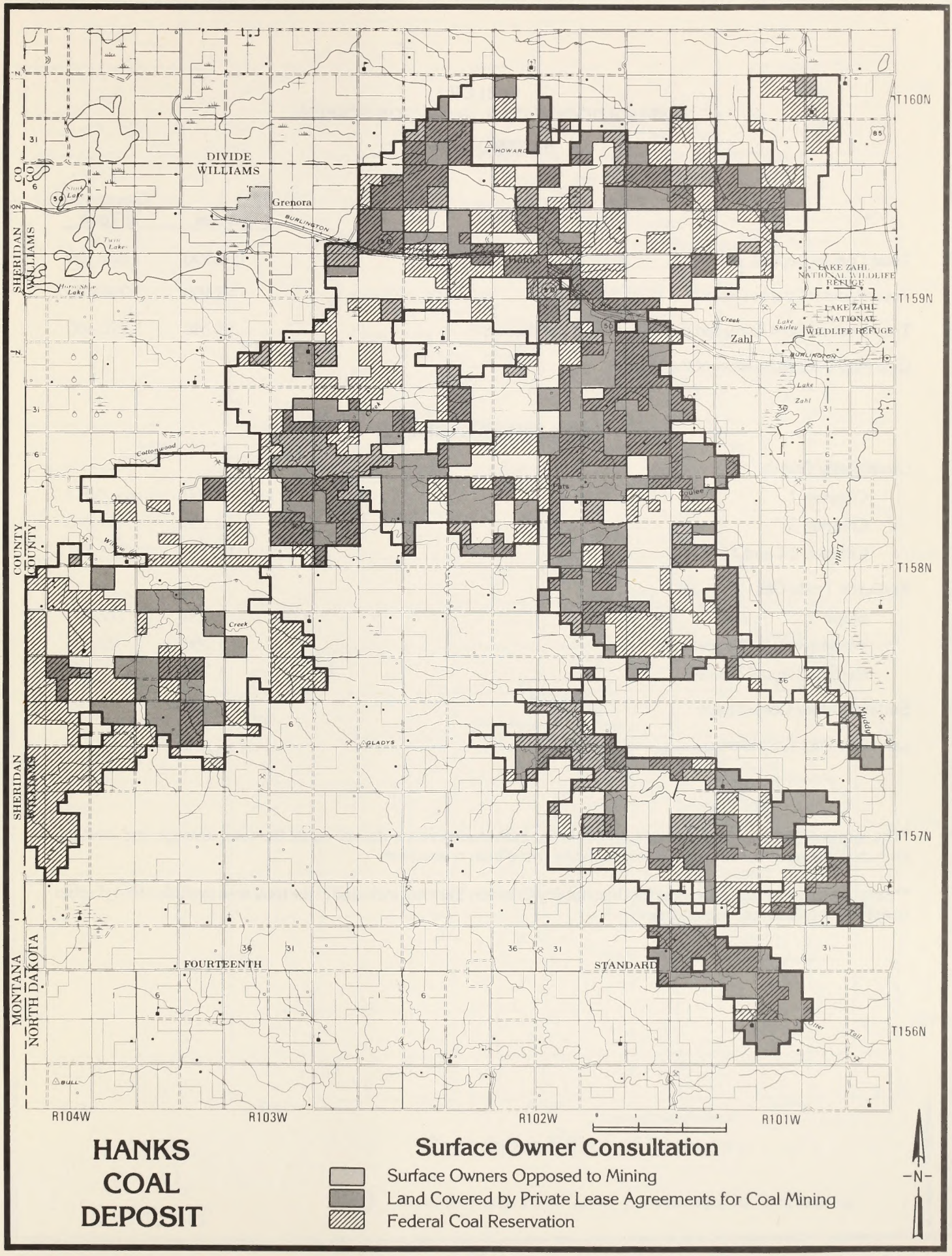
IV. Land Use Plan Consistency

Recommendation: Do not exclude any areas due to land use plans developed by other entities.

Rationale: No other land use plans that cover this area have been identified.



HANKS COAL DEPOSIT



HANKS COAL DEPOSIT

Surface Owner Consultation

- Surface Owners Opposed to Mining
- Land Covered by Private Lease Agreements for Coal Mining
- Federal Coal Reservation

TABLE II
APPLICATION OF COAL EXCLUSION SCREENS
HANKS DEPOSIT

	Acres	Thousands of Tons
Total Coal In Deposit	108,500	1,627,100
Total Federal Coal In Deposit	48,100	726,400
Total Federal Coal Excluded From Further Consideration*	18,240	270,400

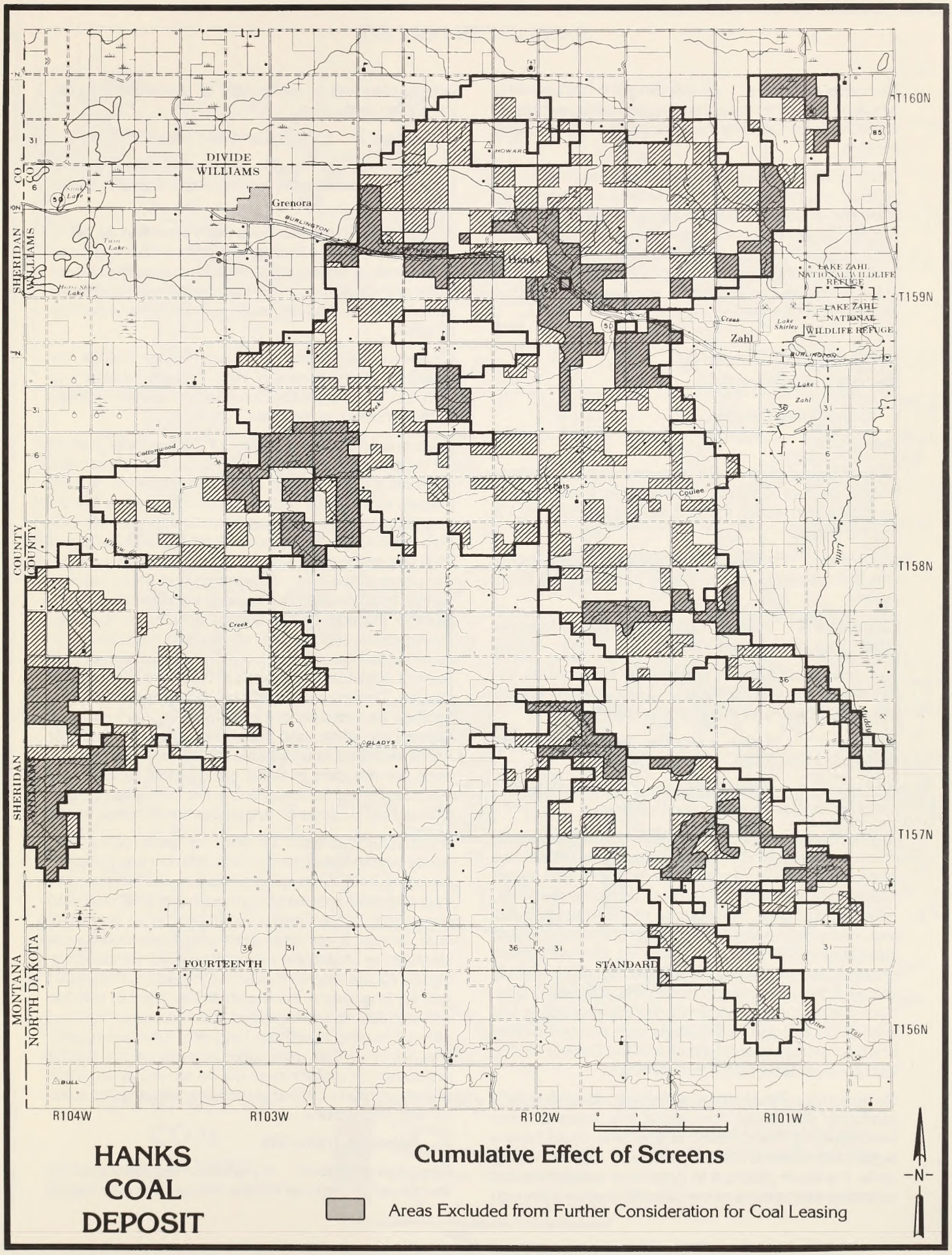
(See Map 7 for illustration of the above.)

EXCLUSIONS BY SCREEN

Unsuitability Criteria		
Criterion 1	560	7,014
Criterion 3**	3,126	47,210
Criterion 14 and 15	12,970	191,871
Resource Trade-Offs		
Slope	7,250	112,443
Wildlife Refuge Watershed	1,760	22,176
Buried Channel Aquifer	1,200	7,427
Surface Owner Consultation	0	0
Land Use Plan Consistency	0	0

*The sums of acreage and tonnage amounts for individual screens do not equal the total acreage and tonnage excluded, because some areas are excluded by more than one screen.

**Acreage and tonnage estimates for Unsuitability Criterion 3 are not included in the total area excluded from further consideration (see recommendation).


DIVIDE
WILLIAMS
Grenora
Hanks
Zahl
LAKE ZAHL
NATIONAL WILDLIFE
REFUGE
LAKE ZAHL
NATIONAL
WILDLIFE REFUGE
SHERIDAN
WILLIAMS
COUNTY
COUNTY
MONTANA
NORTH DAKOTA
FOURTEENTH
STANDARD
GLADYS
T160N
T159N
T158N
T157N
T156N
R104W
R103W
R102W
R101W
HANKS
COAL
DEPOSIT
Cumulative Effect of Screens
Areas Excluded from Further Consideration for Coal Leasing
N

Recommendation: All federal coal in this deposit is available for further consideration for leasing except for those lands excluded by the application of the following screens.

Rationale: The screening process described in the federal coal management regulations was applied to this coal deposit. Certain areas were excluded from further consideration for leasing upon the application of the required screens. Once these screens are applied and appropriate areas excluded, the remainder of the federal coal in the deposit is acceptable for further consideration for leasing.

Application of Screens: Recommendations

I. Unsuitability Criteria

General:

Recommendation: Do not exclude any federal coal lands from further consideration for leasing based on criteria numbers 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, and 20.

Rationale: The Sand Creek Deposit does not contain the resources or conditions addressed by these criteria.

Criterion 1: Federal Land Systems and Incorporated Cities, Towns, and Villages

Recommendation: Federal coal lands within the city of Williston and the National Wildlife Refuge system are unsuitable under this criterion (see Map 8).

Rationale: Criterion 1 requires that these areas be designated unsuitable.

Criterion 3: Buffer Zones along Rights-Of-Way and Adjacent to Communities and Buildings

Recommendation: The following areas are unsuitable for mining: lands within 100 feet of the outside line of the rights-of-way of public roads; within 100 feet of cemeteries; and within 300 feet of occupied dwellings, schools, churches, community or institutional buildings, and public parks. The acreage of these areas was estimated in this plan (see Table III). However, these areas will be considered suitable pending further study during activity planning to determine more exact locations and to consider application of the exceptions and exemption through negotiations with affected entities and land owners in accordance with the Surface Mining Control and Reclamation Act (SMCRA).

Rationale: These areas are small, numerous, and randomly distributed throughout this deposit; therefore, applying this criterion at this time could have a significant effect on the locations of logical mining units. It is more practical to determine exceptions and negotiate exemptions as consideration passes through activity planning to application of stipulations during mine plan evaluation.

Criterion 7: Historic Land and Sites

Recommendation: No areas are excluded from further consideration for leasing at this time due to this criterion.

Rationale: No areas have been identified as being on or eligible for the National Register of Historic Places at this time; however, as further information is gathered at the activity planning and mine plan stages, additional areas could be identified as being unsuitable under this criterion.

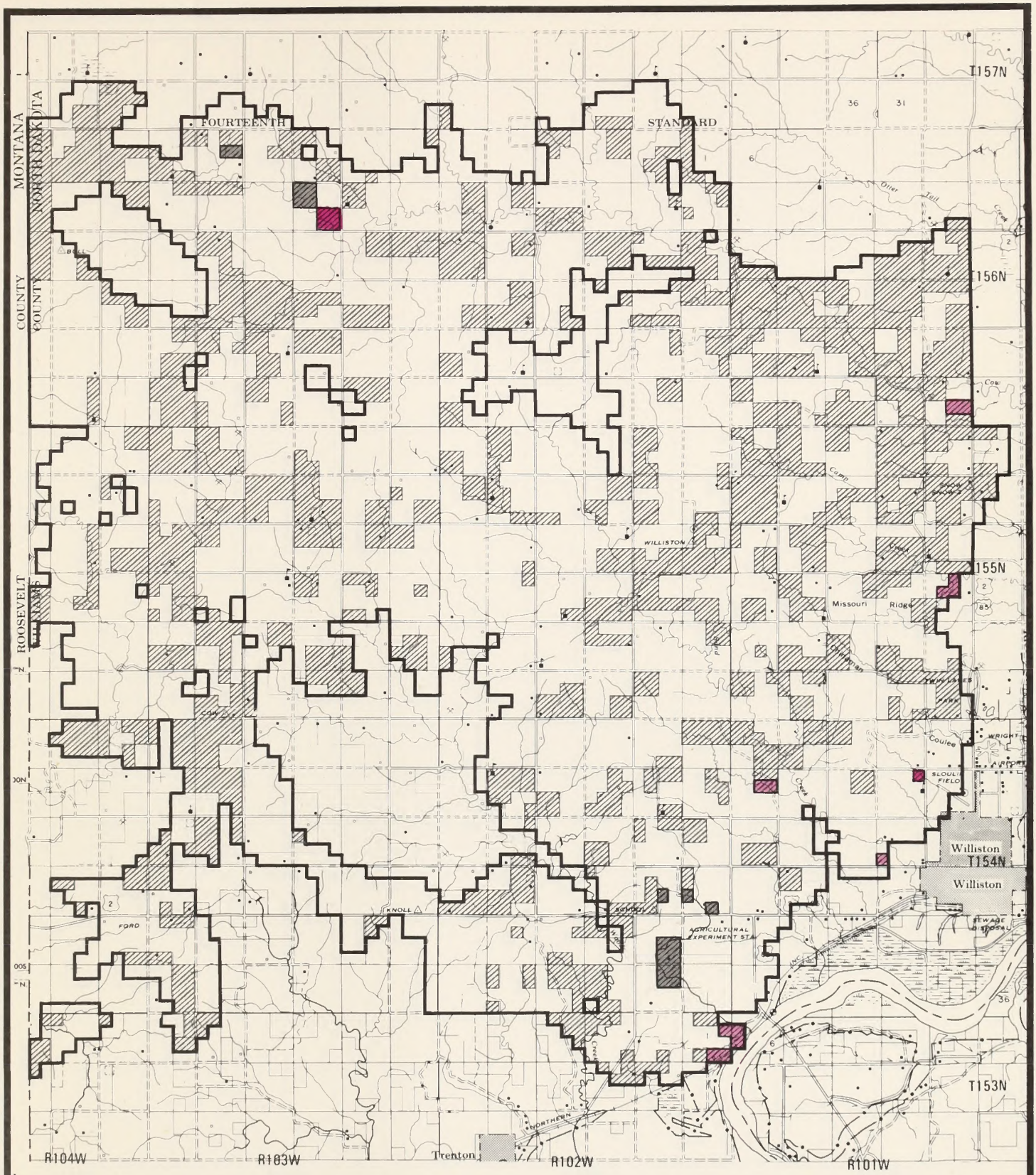
Criteria 14 and 15: High-Priority Habitat for Migratory Bird Species of High Federal Interest and Fish and Wildlife Habitat Essential for Resident Species of High Interest to the State

Recommendation: Areas of high-priority habitat for migratory bird species of high federal interest and essential wildlife habitat for resident species of high interest to the State were identified through a habitat mapping process involving consultation with the U.S. Fish and Wildlife Service and North Dakota Game and Fish Department. Designate specific acreage unsuitable where it has been determined that these habitats cannot be mined without causing significant long-term adverse impacts to the wildlife species in question. Designate as suitable with stipulations high-priority or essential habitats where restoration or replacement will prevent significant long-term adverse impacts to such species. The lease stipulations should require that such habitats be restored or replaced as agreed upon by appropriate state and federal regulatory agencies. Areas identified as unsuitable and suitable with stipulations are mapped in detail on 1:24,000 scale maps available for public inspection at the Dickinson District Office. Map 9 shows an approximation of these areas.

Rationale: Criteria 14 and 15 were considered jointly because analysis for each criterion was based on the same habitat mapping products, and because the migratory bird species of high federal interest were also considered by the State of North Dakota as species of high interest. It has been determined that those areas identified as unsuitable cannot be mined without causing significant long-term adverse impacts to the wildlife species in question, but the areas identified as suitable with stipulations can be mined and restored or replaced without causing significant long-term adverse impacts. It is assumed that reasonable stipulations for habitat restoration or replacement will be agreed upon which will not preclude mining in the areas identified as suitable with stipulations.

II. Resource Trade-Offs

Recommendation: A portion of the watershed for the lake at the National Wildlife Refuge area (see Map 8)



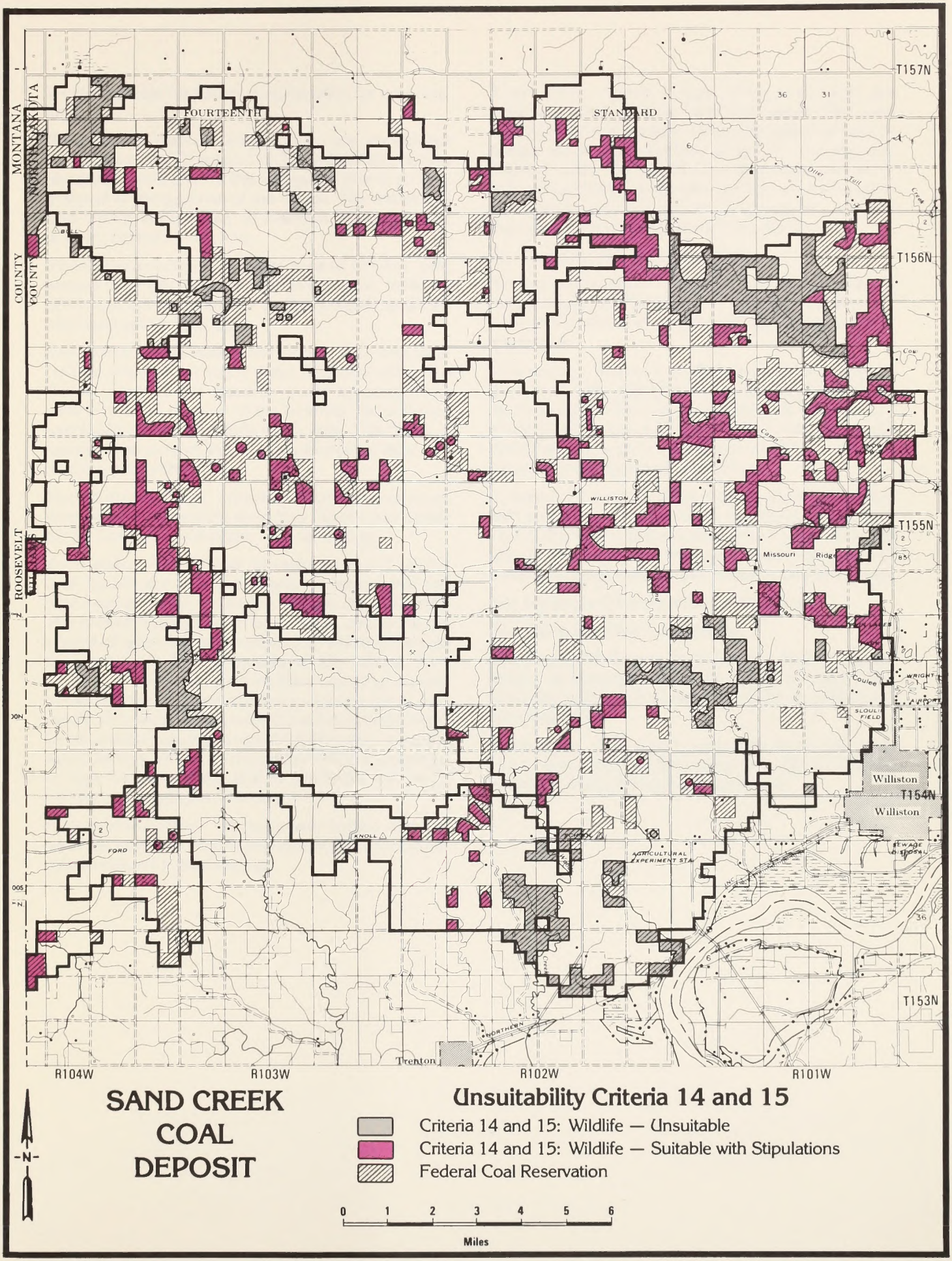
SAND CREEK COAL DEPOSIT

Unsuitability Criterion 1 and Resource Trade-offs

- Criterion 1
- Wildlife Refuge Watershed
- Experiment Station Buffer
- Buried Channel Aquifer
- Federal Coal Reservation

0 1 2 3 4 5 6

Miles


MONTANA
NORTH DAKOTA
COUNTY
COUNTY
ROOSEVELT
FOURTEENTH
STANDARD
T157N
T156N
T155N
T154N
T153N
WILLISTON
Missouri
Ridge
Coulee
Williston
Williston
KNOLL
FORD
AGRICULTURAL EXPERIMENT STA.
Trenton
R104W
R103W
R102W
R101W
SAND CREEK
COAL
DEPOSIT
Unsuitability Criteria 14 and 15
Criteria 14 and 15: Wildlife — Unsuitable
Criteria 14 and 15: Wildlife — Suitable with Stipulations
Federal Coal Reservation
N
0 1 2 3 4 5 6
Miles

is unacceptable for further consideration for coal leasing.

Rationale: Wildlife refuge lands are considered unsuitable under Criterion 1 of the unsuitability criteria discussed previously. At this refuge the lake is an integral part of the purpose of the refuge. The watershed area shown is necessary to maintain the quality and quantity of water in the lake.

Recommendation: A buffer zone of one-half mile around the Agriculture Experiment Station, Williston Branch, is unacceptable for further consideration for coal leasing (see Map 8).

Rationale: This station has been conducting agricultural research for many years. The data collection that is a part of this research would be sensitive to otherwise small changes in the baseline microclimate and fugitive dust conditions in the area. This buffer is necessary to protect the validity of baseline data and ongoing research efforts.

Recommendation: The areas with high concentrations of steep slopes (shown in Map 10) are unacceptable for further consideration for coal leasing.

Rationale: The breaks topography found in this coal deposit is a unique topographic feature and has high aesthetic value to people living in North Dakota. The broken topography in these areas also limits the impact of agricultural disturbances, which enhances the opportunity for high-quality wildlife habitat. As a result of that, the areas are valuable for hunting. In order to assure the continued existence of these values and satisfy state reclamation laws, the areas would have to be returned to rough topography if they were mined. It would be very difficult to reconstruct steep topography in high concentrations, due to problems with slope stability and mining economics.

Recommendation: Areas where buried channel aquifers occur (see Map 8) are unacceptable for further consideration for coal leasing.

Rationale: These buried channel aquifers are important water sources with high yields and good quality. In most areas they are capable of being used as a water source for irrigation as well as domestic and livestock uses. The only source of replacement water with comparable quantity and quality for these areas is Lake Sakakawea. It would not be practical to replace this water source by a pipeline from the lake.

III. Surface Owner Consultation

Recommendation: Exclude from further leasing consideration the federal coal indicated on Map 11. This coal is within areas of significant surface owner opposition.

Rationale: In Area I, 87 percent of the federal coal is associated with opposition. That opposition accounts for 61 percent of the total coal in the area. Only about 1 percent of the coal is affected by a private coal lease. There are no federal coal leases in effect or surface lease agreements over federal coal.

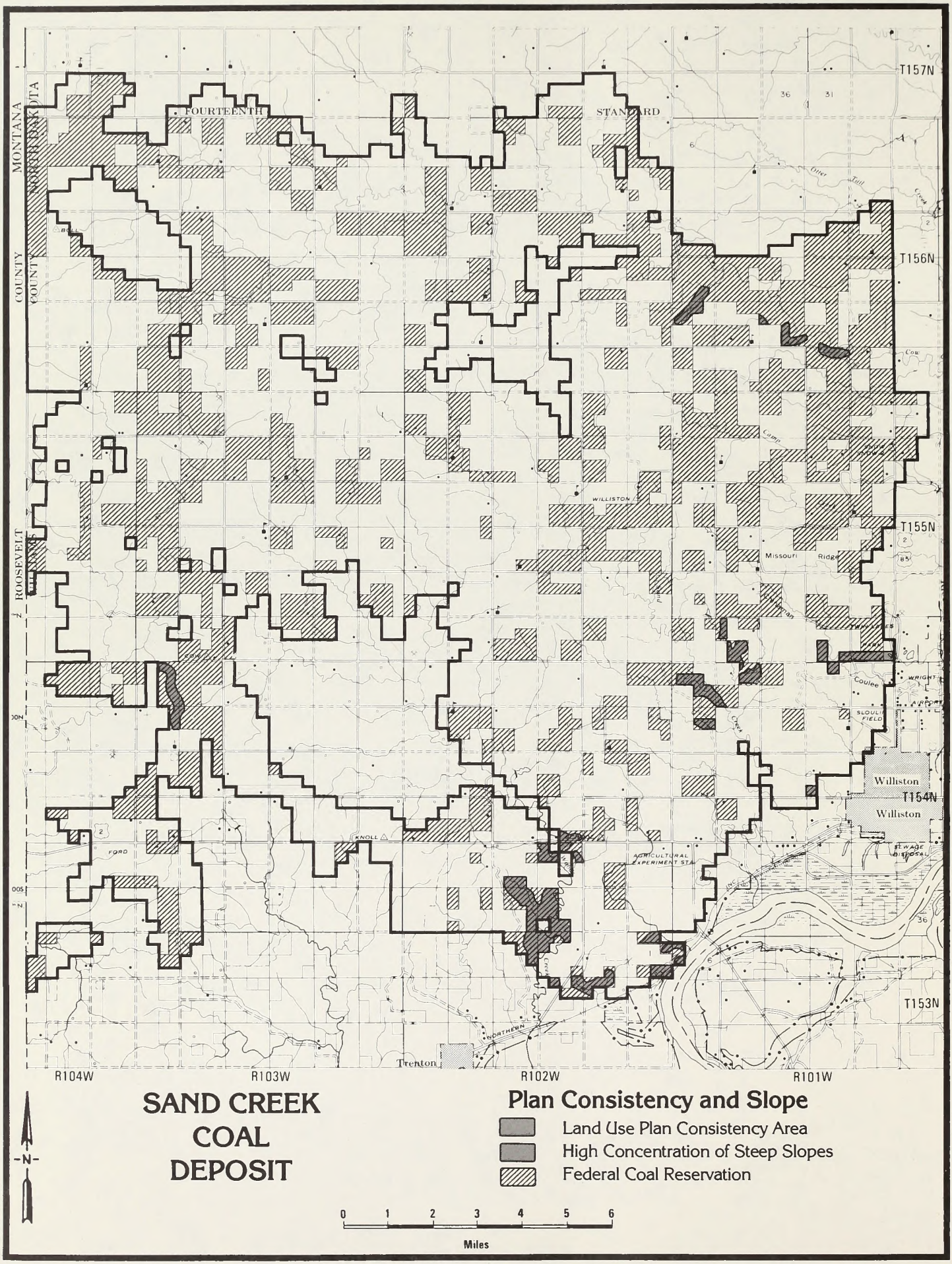
In Area II, 67 percent of the federal coal is associated with surface owner opposition, accounting for 48 percent of the total coal in the area. Only 11 percent of the area is affected by a private coal lease (320 acres) or surface lease agreement over federal coal (200 acres).

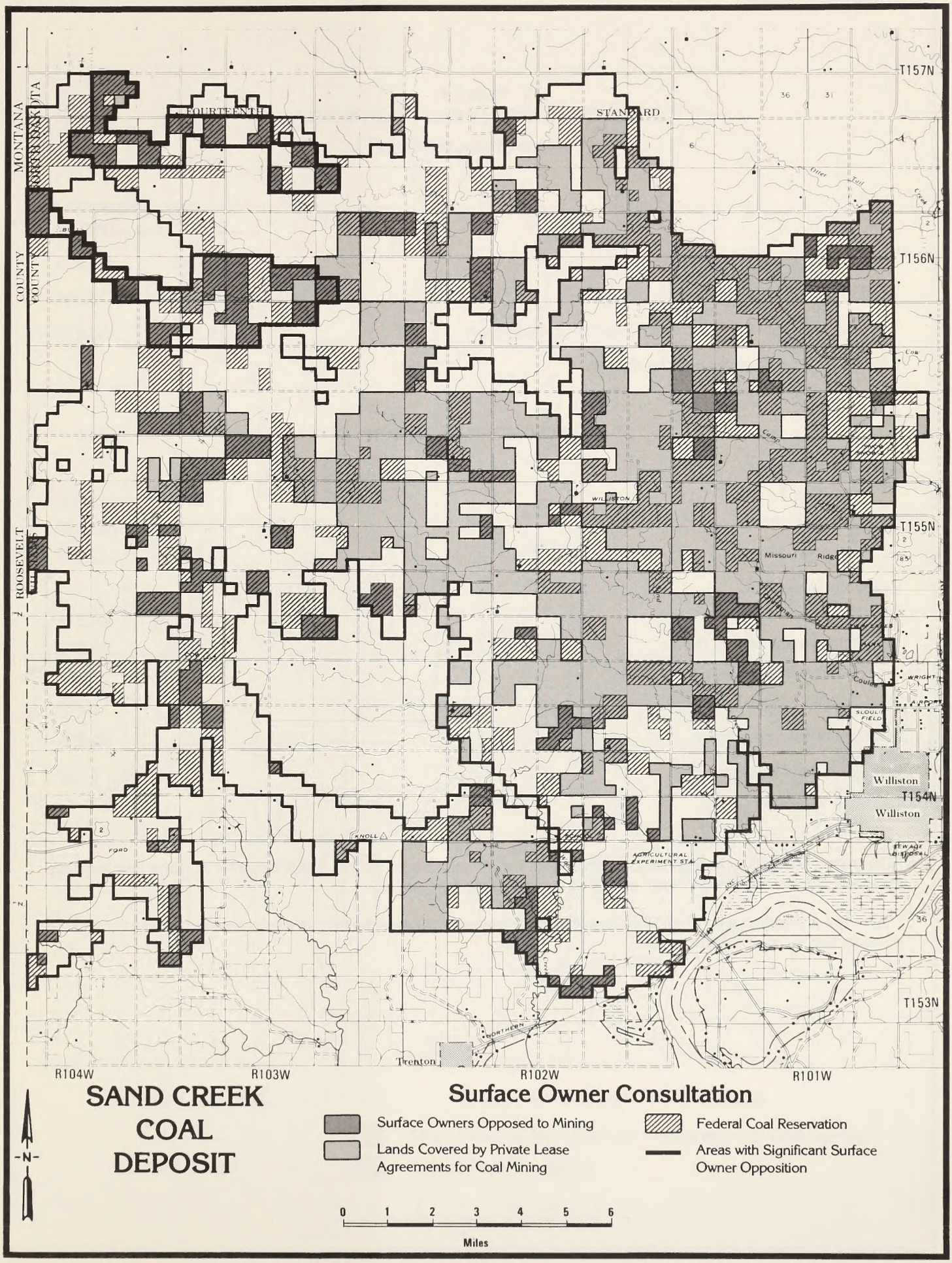
See Appendix G for consultation statistics.

IV. Land Use Plan Consistency

Recommendation: Exclude from further consideration for leasing some of the federal coal which lies within the area of zoning authority of the city of Williston (see Map 10).

Rationale: This area is zoned for residential, open space, and industrial land uses. The city of Williston expects to need this area for expansion.


T157N
T156N
T155N
T154N
T153N
R104W
R103W
R102W
R101W
MONTANA
NORTH DAKOTA
COUNTY
COUNTY
ROOSEVELT
FOURTEENTH
STANDARD
WILLISTON
Missouri
Ridge
Coulee
SLOUGH
FIELD
Williston
Williston
KNOLL
FORD
AGRICULTURAL
EXPERIMENT STA
SEWAGE
DISPOSAL
NORTHERN
Trenton
SAND CREEK
COAL
DEPOSIT
Plan Consistency and Slope
Land Use Plan Consistency Area
High Concentration of Steep Slopes
Federal Coal Reservation
N
0 1 2 3 4 5 6
Miles


MONTANA
NORTH DAKOTA
COUNTY
COUNTY
ROOSEVELT
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T153N
WILLISTON
Missouri
Ridge
Williston
Williston
KNOLL
FORD
AGRICULTURAL EXPERIMENT STA
SLOULIN FIELD
WRIGHT
Trenton
NORTHERN
R104W
R103W
R102W
R101W
SAND CREEK
COAL
DEPOSIT
Surface Owner Consultation
Surface Owners Opposed to Mining
Lands Covered by Private Lease Agreements for Coal Mining
Federal Coal Reservation
Areas with Significant Surface Owner Opposition
N
0 1 2 3 4 5 6
Miles

TABLE III
APPLICATION OF COAL EXCLUSION SCREENS
SAND CREEK DEPOSIT

	Acres	Thousands of Tons
Total Coal In Deposit	174,880	2,928,000
Total Federal Coal In Deposit	57,860	975,000
Total Federal Coal Excluded From Further Consideration*	15,330	250,472

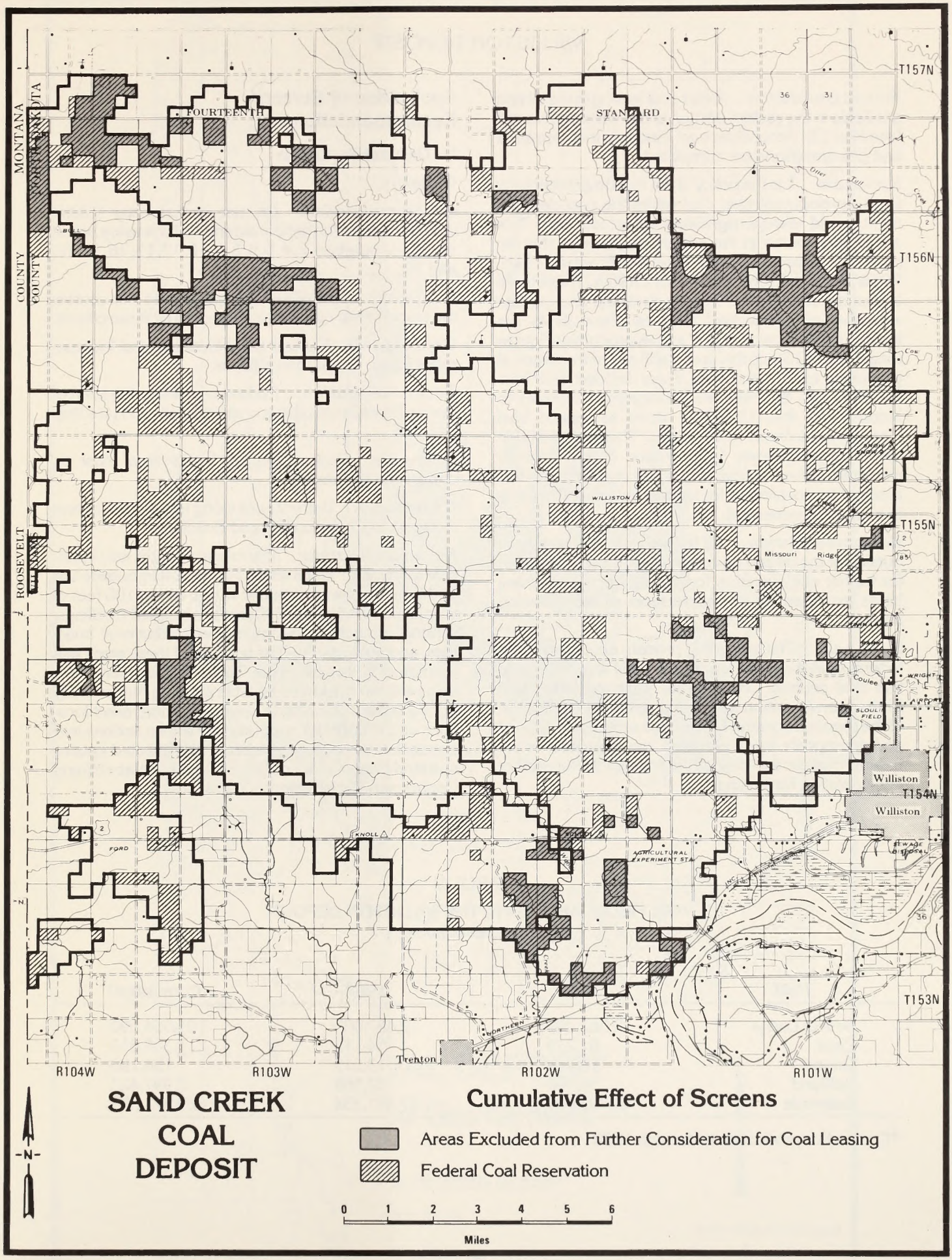
(See Map 12 for illustration of the above.)

EXCLUSIONS BY SCREEN

Unsuitability Criteria		
Criterion 1	200	3,080
Criterion 3**	3,705	62,439
Criterion 14 and 15	10,930	182,423
Resource Trade-Offs		
Slope	2,570	40,374
Experiment Station Buffer	440	10,857
Buried Channel Aquifer	520	7,084
Wildlife Refuge Watershed	240	3,360
Surface Owner Consultation	5,520	82,355
Land Use Plan Consistency	320	7,182

*The sums of acreage and tonnage amounts for individual screens do not equal the total acreage and tonnage excluded, because some areas are excluded by more than one screen.

**Acreage and tonnage estimates for Unsuitability Criterion 3 are not included in the total area excluded from further consideration (see recommendation).


T157N
T156N
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FOURTEENTH
STANDARD
WILLISTON
Missouri Ridge
Williston
Williston
Trenton
KNOLL
FORD
AGRICULTURAL EXPERIMENT STA
SEWAGE DISPOSAL
SLOULIN FIELD
Coulee
MONTANA
COUNTY
ROOSEVELT
SAND CREEK
COAL
DEPOSIT
Cumulative Effect of Screens
Areas Excluded from Further Consideration for Coal Leasing
Federal Coal Reservation
N
0 1 2 3 4 5 6
Miles

Recommendation: Defer coal leasing in the oil and gas fields in the eastern portion of the Williston Deposit (see Map 13). Reconsider coal leasing in this area as oil and gas operations are completed.

Rationale: It is the policy of the BLM to grant priority to oil development over coal where the coal development could disrupt significant oil production. This would likely occur in the eastern segment of this deposit. The impacts would be most signficant in T154N, R95W; T155N, R95W; and T155N, R96W. These three townships straddle the Nesson Anticline and contain extensive oil production facilities. Four fields are located in this area. (Table IV shows production figures for each field.) Since this area is still one of the larger oil producing areas in the State, it was decided (after consultation with the Minerals Management Service) to recommend that 10,167.72 acres of federal coal reserves be deferred from leasing. This area is underlain by approximately 142.6 million tons of high or moderate potential coal. It is recommended that this land not be considered for leasing until the oil fields in that area are exhausted.

Recommendation: All federal coal in this deposit outside of the oil and gas area noted above is available for further consideration for leasing, except for those lands excluded by the application of the following screens.

Rationale: The screening process described in the federal coal management regulations was applied to this coal deposit. Certain areas were excluded from further consideration for leasing upon the application of the required screens. Once these screens are applied and appropriate areas excluded, the remainder of the federal coal in the deposit is acceptable for further consideration for leasing.

Application of Screens: Recommendations

I. Unsuitability Criteria

General:

Recommendation: Do not exclude any federal coal lands from further consideration for leasing based on criteria numbers 2, 4, 5, 6, 8, 9, 10, 12, 13, 16, 17, 18, and 20.

Rationale: The Williston Deposit does not contain the resources or conditions addressed by these criteria.

Criterion 1: Federal Land Systems and Incorporated Cities, Towns, and Villages.

Recommendation: Federal coal within the town of Spring Brook is unsuitable under this criterion (see Map 14).

Rationale: Under Criterion 1 this area must be designated unsuitable.

Criterion 3: Buffer Zones along Rights-Of-Way and Adjacent to Communities and Buildings

Recommendation: The following areas are unsuitable for mining: lands within 100 feet of the outside line of the rights-of-way of public roads; within 100 feet of cemeteries; and within 300 feet of occupied dwellings, schools, churches, community or institutional buildings, and public parks. The acreage of these areas was estimated in this plan (see Table V). However, these areas will be considered suitable pending further study during activity planning to determine more exact locations and to consider application of the exceptions and exemption through negotiations with affected entities and land owners in accordance with the Surface Mining Control and Reclamation Act (SMCRA).

TABLE IV

OIL FIELDS AFFECTING THE WILLISTON DEPOSIT
(production in barrels)

Field	1981	1982	Cumulative*
Beaver Lodge	2,682,499	2,487,085	101,954,590
Capa	61,239	54,112	11,308,610
Grinnel	18,714	13,515	154,199
Hofflund	58,399	32,568	2,997,423
Statewide	45,707,000	47,481,334	689,271,393

*Cumulative production is through 1982.

WILLISTON COAL DEPOSIT

Slope and Oil and Gas Conflict

- High Concentration of Steep Slopes
- Oil and Gas Conflict Area
- Federal Coal Reservation

N

1 0 1 2

R101W R100W R99W R98W R97W R96W R95W

T156N T155N T154N T153N

Ray
Epping
Spring Brook
Wheelock
Hoffland
Williston
Williston
Tobacco Garden State Game Management Area
Hoffland State Game Management Area
Lake Sakakawea
Missouri River
Williams County
McKenzie County
Williams Co.

R101W R100W R99W R98W R97W R96W R95W

T156N T155N T154N T153N

Ray
Epping
Spring Brook
Wheelock
Williston
Hofflund
Tioga
Nesson
Red Mike Hill
Valley
Tobacco

NORTHERN PACIFIC RAILWAY
BURLINGTON NORTHERN RAILWAY
MERIDIAN WEST
COUNTY
WILLIAMS COUNTY
MISSOURI RIVER
LAKE SAKAKAWEA
Hofflund Bay
White Tail Bay
TOBACCO GARDEN STATE GAME MANAGEMENT AREA
HOFFLUND STATE GAME MANAGEMENT AREA
LEWIS & CLARK RECREATION AREA
WILLIAMS McKENZIE COUNTY
Dawers Slough
Hungre Gulch
Spring
Creek
Fork
Coulee
Brook
Field
Lake
Bay
Big
Pond
Radio Tower
Radio Towers
Fence
Grove
Temple
Haugen
Willow
Firehill
Thirteenth
Meridian
Railway
Sewage Disposal
Sloulin Field
Twin Lakes Park
Wright
Snow
Snow-2
Spring
Cow
Muddy
Little Muddy
Burlington
Northern
Epping
Railway
Ray
Northern
Fence
Temple
Tioga
Radio Tower
Radio Towers
Haugen
Wheelock
Grove
Hofflund
Guide
Nesson
Valley
Red Mike Hill
Tobacco
Lake Sakakawea
Hofflund Bay
White Tail Bay
Tobacco Garden State Game Management Area
Lewis & Clark Recreation Area
Williams McKenzie County
Missouri River
Dawers Slough
Hungre Gulch
Spring
Creek
Fork
Coulee
Brook
Field
Lake
Bay
Big
Pond
Firehill
Thirteenth
Meridian
Railway
Sewage Disposal
Sloulin Field
Twin Lakes Park
Wright
Snow
Snow-2
Spring
Cow
Muddy
Little Muddy
Burlington
Northern
Epping
Railway
Ray
Northern
Fence
Temple
Tioga
Radio Tower
Radio Towers
Haugen
Wheelock
Grove
Hofflund
Guide
Nesson
Valley
Red Mike Hill
Tobacco
Lake Sakakawea
Hofflund Bay
White Tail Bay
Tobacco Garden State Game Management Area
Lewis & Clark Recreation Area
Williams McKenzie County
Missouri River
Dawers Slough
Hungre Gulch
Spring
Creek
Fork
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Meridian
Railway
Sewage Disposal
Sloulin Field
Twin Lakes Park
Wright
Snow
Snow-2
Spring
Cow
Muddy
Little Muddy
Burlington
Northern
Epping
Railway
Ray
Northern
Fence
Temple
Tioga
Radio Tower
Radio Towers
Haugen
Wheelock
Grove
Hofflund
Guide
Nesson
Valley
Red Mike Hill
Tobacco
Lake Sakakawea
Hofflund Bay
White Tail Bay
Tobacco Garden State Game Management Area
Lewis & Clark Recreation Area
Williams McKenzie County
Missouri River

WILLISTON COAL DEPOSIT

Unsuitability Criteria 1 and 19

- Criterion 19: Preliminary Alluvial Valley Floor
- Criterion 1: Wildlife Refuge and Towns and Cities
- Federal Coal Reservation

N

1 0 1 2

Rationale: These areas are small, numerous, and randomly distributed throughout this deposit; therefore, applying this criterion at this time could have a significant effect on the locations of logical mining units. It is more practical to determine exceptions and negotiate exemptions as consideration passes through activity planning to application of stipulations during mine plan evaluation.

Criterion 7: Historic Land and Sites

Recommendation: No areas are excluded from further consideration for leasing at this time due to this criterion.

Rationale: No areas have been identified as being on or eligible for the National Register of Historic Places at this time; however, as further information is gathered at the activity planning and mine plan stages, additional areas could be identified as being unsuitable under this criterion.

Criterion 11: Bald and Golden Eagle Nests

Recommendation: The golden eagle nest sites and an appropriate buffer zone of land around the nest sites are unsuitable. These sites are located in the breaks in the southern portion of this deposit. The exact size of the buffer zone has not been determined because the entire area considered unsuitable due to this criterion is within the area being recommended for exclusion for a number of other reasons.

Rationale: Regulations require that nest sites and a buffer zone be unsuitable. Determination of appropriate buffer areas would involve more detailed consultation with the U.S. Fish and Wildlife Service. It was decided that, since these areas were being recommended for exclusion based on other resource values, it was not appropriate at this time to carry out this consultation process. In the event any of these areas do get to the activity planning stage, it is required that consultation be completed with the U.S. Fish and Wildlife Service to determine the biological buffer for each golden eagle nest.

Criterion 14 and 15: High Priority Habitat for Migratory Bird Species of High Federal Interest and Fish and Wildlife Habitat Essential for Resident Species of High Interest to the State

Recommendation: Areas of high-priority habitat for migratory bird species of high federal interest and essential wildlife habitat for resident species of high interest to the State were identified through a habitat mapping process involving consultation with the U.S. Fish and Wildlife Service and North Dakota Game and Fish Department. Designate specific acreage unsuitable where it has been determined that these habitats cannot be mined without causing significant long-term adverse impacts to the wildlife species in question. Designate as suitable with stipulations high-priority or essential habitats where restoration or replacement will prevent significant long-term adverse impacts to such species. The lease stipulations should require that such habitats be restored or replaced as agreed upon by appropriate state and federal regulatory agencies. Areas identified as unsuitable and suitable with stipulations are mapped in detail on 1:24,000 scale maps available for public inspection at the Dickinson District Office. Map 15 shows an approximation of these areas.

Rationale: Criteria 14 and 15 were considered jointly because analysis for each criterion was based on the same habitat mapping products, and because the migratory bird species of high federal interest were also considered by the State of North Dakota as species of high interest. It has been determined that those areas identified as unsuitable cannot be mined without causing significant long-term adverse impacts to the wildlife species in question, but the areas identified as suitable with stipulations can be mined and restored or replaced without causing significant long-term adverse impacts. It is assumed that reasonable stipulations for habitat restoration or replacement will be agreed upon which will not preclude mining in the areas identified as suitable with stipulations.

Criterion 19: Alluvial Valley Floors

Recommendation: Alluvial valley floors (AVF) in the deposit are unsuitable; however, since final delineation cannot be done until mining plan time, application of this criterion is deferred. Map 14 shows preliminary designations of AVF.

Rationale: Information is insufficient at this time to make final determinations on the AVF potentially associated with Beaver, Long, and Stony creeks. It has not yet been determined whether or not protection of these potential AVF is needed and to what extent. The maximum extent of unsuitability designation will not be more than that shown on Map 14.

II. Resource Trade-Offs

Recommendation: The area along the shoreline of Lake Sakakawea that is depicted in Map 16 is unacceptable for further consideration for coal leasing.

Rationale: Lake Sakakawea is the largest and best quality surface water body in the State and is also the most highly developed recreational resource. A buffer is necessary to protect the quality of the edgewaters of the lake and also to ensure the quality of recreational experiences.

Recommendation: The areas with high concentrations of steep slopes (shown in Map 13) are unacceptable for further consideration for coal leasing.

Rationale: The breaks and buttes topography found in this coal deposit is a unique feature and has high aesthetic value to people living in North Dakota. The broken topography in these areas also limits the impact of agricultural disturbances, which enhances

WILLISTON COAL DEPOSIT

Unsuitability Criteria 14 and 15

Criteria 14 and 15: Wildlife — Unsuitable

Criteria 14 and 15: Wildlife — Suitable with Stipulations

Federal Coal Reservation

N

1 0 1 2

R101W R100W R99W R98W R97W R96W R95W

T156N T155N T154N T153N

Ray Epping Wheelock Spring Brook Hofflund Williston

HOFFLUND STATE GAME MANAGEMENT AREA

TOBACCO GARDEN STATE GAME MANAGEMENT AREA

LAKE SAKAKAWEA

MISSOURI RIVER

WILLIAMS COUNTY

MCKENZIE COUNTY

WILLISTON COAL DEPOSIT

Lake Sakakawea and Buried Channel Aquifer

Lake Sakakawea Buffer

Buried Channel Aquifer

Federal Coal Reservation

N

1 0 1 2

R101W R100W R99W R98W R97W R96W R95W

T156N T155N T154N T153N

Williston Epping Spring Brook Ray Wheelock Tioga Hofflund Tobacco

Missouri River Lake Sakakawea

Williams McKenzie County

the opportunity for high-quality wildlife habitat. As a result of that, the areas are valuable for hunting. In order to assure the continued existence of these values and satisfy state reclamation laws, the areas would have to be returned to rough topography if they were mined. It would be very difficult to reconstruct steep topography in high concentrations due to problems with slope stability and mining economics.

Recommendation: Areas where buried channel aquifers occur (see Map 16) are unacceptable for further consideration for coal leasing. The exact location of the buried channel near the town of Ray is currently being better defined. Any changes in federal coal exclusion areas due to this updated information will be made in the decision document.

Rationale: These buried channel aquifers are important water sources with high yields and very good quality. In most areas they are capable of being used as a water source for irrigation as well as domestic and livestock uses. The only source of replacement water with comparable quantity and quality for these areas is Lake Sakakawea. It would not be practical to replace this water source by a pipeline from the Lake.

III. Surface Owner Consultation

Recommendation: On the basis of significant surface owner opposition, exclude from further consideration the federal coal lands outlined in Map 17.

Rationale: Within this area approximately 7,820 acres of federal coal are associated with surface owner opposition. There are a total of 13,300 acres of federal coal in the area; thus, 59 percent of the federal coal is affected by opposition. If non-federal and federal coal is considered, approximately one-half of the coal in the outlined area is affected by opposition. There is no evidence of private coal leases or surface lease agreements (for mining) in the area.

See Appendix F for consultation statistics.

IV. Land Use Plan Consistency

Recommendation: Do not exclude any areas due to land use plans developed by other entities.

Rationale: The portion of this deposit covered by the Williston city plan is identified as being available for possible mineral development. No other land use plans that cover this area have been identified.

WILLISTON COAL DEPOSIT
Surface Owner Consultation

- Federal Coal Leases
- Surface Owners Opposed to Mining
- Lands Covered by Private Lease Agreements for Coal Mining
- Federal Coal Reservation
- Areas with Significant Surface Owner Opposition

N

1 0 1 2

R101W R100W R99W R98W R97W R96W R95W

T156N T155N T154N T153N

Ray
Epping
Spring Brook
Wheelock
Hafflund
Williston
Tioga
Nesson Valley
Red Mike Hill
Tobacco

Missouri River
Lake Sakakawea
Hafflund Bay
White Tail Bay

Hafflund State Game Management Area
Tobacco Garden State Game Management Area
Lewis & Clark Recreation Area

Williams County
McKenzie County
Williams County
Mountrail County

Little Muddy Creek
Muddy Creek
Dauers Slough
Hungre Gulch Slough
Four Bears Bridge
Fort Buford Bridge
Fort Union Trading Post

TABLE V
APPLICATION OF COAL EXCLUSION SCREENS
WILLISTON DEPOSIT

	Acres	Thousands of Tons
Total Coal In Deposit	172,240	2,776,600
Total Federal Coal In Deposit	97,320	1,570,900
Total Federal Coal Excluded From Further Consideration*	67,770	1,054,422

(See Map 18 for illustration of the above.)

EXCLUSIONS BY SCREEN

Unsuitability Criteria		
Criterion 1	40	539
Criterion 3**	7,300	117,786
Criterion 14 and 15	55,598	892,478
Criterion 19**	18,160	319,725
Resource Trade-Offs		
Slope	46,410	716,488
Lake Buffer	23,357	330,680
Buried Channel	2,360	39,994
Oil and Gas	10,168	142,600
Surface Owner Consultation	13,174	145,857
Land Use Plan Consistency	0	0

*The sums of acreage and tonnage amounts for individual screens do not equal the total acreage and tonnage excluded, because some areas are excluded by more than one screen.

**Acreage and tonnage estimates for Unsuitability Criteria 3 and 19 are not included in the total area excluded from further consideration (see recommendations).

R101W R100W R99W R98W R97W R96W R95W

T156N

T155N

T154N

T153N

Ray

Wheelock

Epping

Spring Brook

Williston

Williston

Hofflund

Tobacco Garden State Game Management Area

Hofflund State Game Management Area

Lake Sakakawea

Missouri River

Williams County

McKenzie County

Williams Co.

WILLISTON COAL DEPOSIT

Cumulative Effect of Screens

Areas Excluded from Further Consideration for Coal Leasing

Coal Leasing Deferred

Federal Coal Reservation

N

1 0 1 2

Recommendation: All federal coal in this deposit is available for further consideration for leasing except for those lands excluded by the application of the following screens.

Rationale: The screening process described in the federal coal management regulations was applied to this coal deposit. Certain areas were excluded from further consideration for leasing upon the application of the required screens. Once these screens are applied and appropriate areas excluded, the remainder of the federal coal in the deposit is acceptable for further consideration for leasing.

Application of Screens: Recommendations

I. Unsuitability Criteria

General:

Recommendation: Do not exclude any federal coal lands from further consideration for leasing based on criteria numbers 1, 2, 4, 5, 6, 8, 9, 10, 12, 13, 16, 17, 18, and 20.

Rationale: The Tobacco Garden Deposit does not contain the resources or conditions addressed by these criteria.

Criterion 3: Buffer Zones along Rights-Of-Way and Adjacent to Communities and Buildings

Recommendation: The following areas are unsuitable for mining: lands within 100 feet of the outside line of the rights-of-way of public roads; within 100 feet of cemeteries; and within 300 feet of occupied dwellings, schools, churches, community or institutional buildings, and public parks. The acreage of these areas was estimated in this plan (see Table VI). However, these areas will be considered suitable pending further study during activity planning to determine more exact locations and to consider application of the exceptions and exemption through negotiations with affected entities and land owners in accordance with the Surface Mining Control and Reclamation Act (SMCRA).

Rationale: These areas are small, numerous, and randomly distributed throughout this deposit; therefore, applying this criterion at this time could have a significant effect on the locations of logical mining units. It is more practical to determine exceptions and negotiate exemptions as consideration passes through activity planning to application of stipulations during mine plan evaluation.

Criterion 7: Historic Land and Sites

Recommendation: No areas are excluded from further consideration for leasing at this time due to this criterion.

Rationale: No areas have been identified as being on or eligible for the National Register of Historic Places at this time; however, as further information is gathered at the activity planning and mine plan stages, additional areas could be identified as being unsuitable under this criterion.

Criterion 11: Bald and Golden Eagle Nests

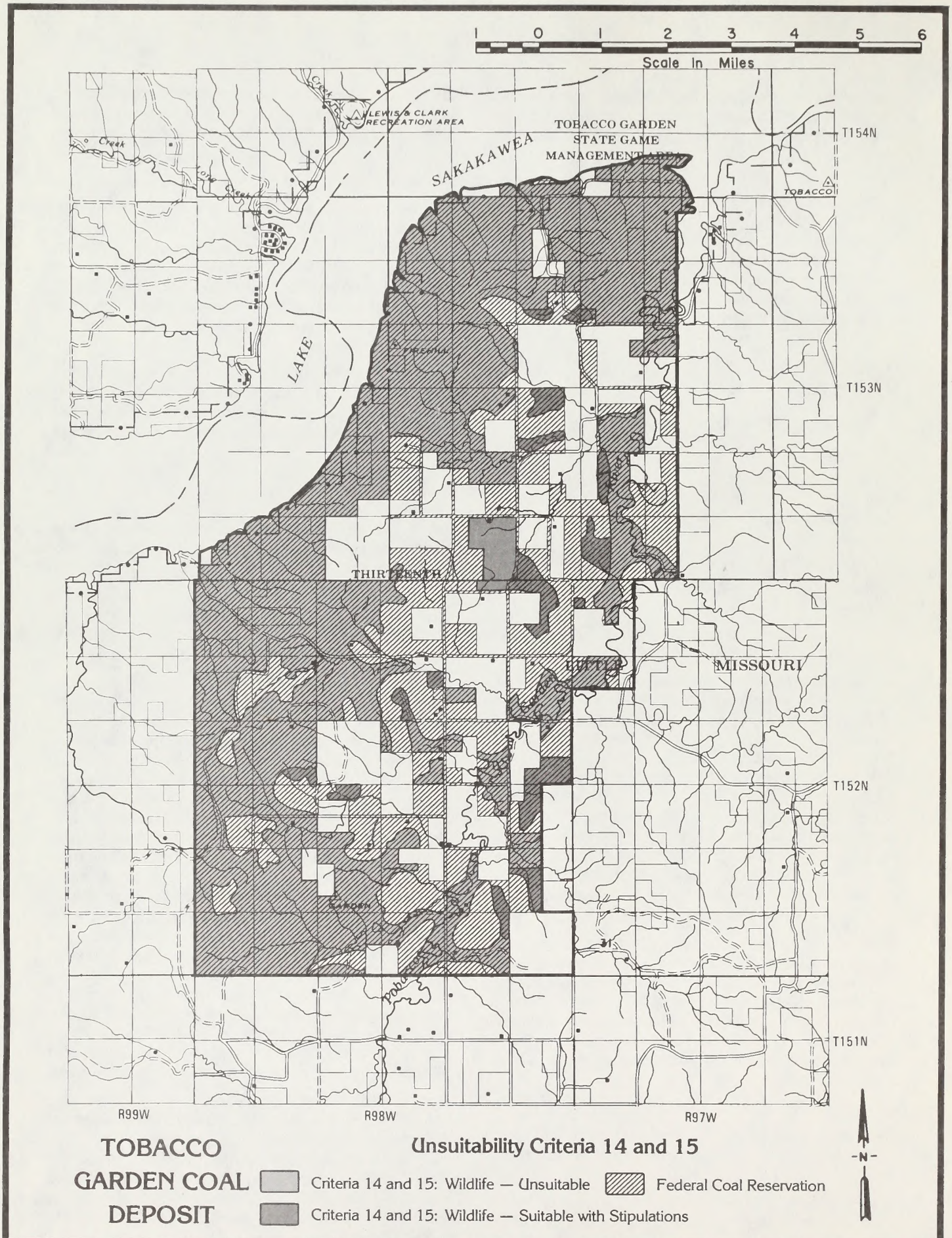
Recommendation: The golden eagle nest site and an appropriate buffer zone of land around the nest site is unsuitable. The site is located in the breaks in the northwestern portion of this deposit. The exact size of the buffer zone has not been determined, because the entire area considered unsuitable due to this criterion is within the area being recommended for exclusion for a number of other reasons.

Rationale: Regulations require that nest sites and a buffer zone be unsuitable. Determination of appropriate buffer areas would involve more detailed consultation with the U.S. Fish and Wildlife Service. It was decided that, since these areas were being recommended for exclusion based on other resource values, it was not appropriate at this time to carry out this consultation process. In the event any of these areas do get to the activity planning stage, it is required that consultation be completed with the U.S. Fish and Wildlife Service to determine the biological buffer for each golden eagle nest.

Criterion 14 and 15: High-Priority Habitat for Migratory Bird Species of High Federal Interest and Fish and Wildlife Habitat Essential for Resident Species of High Interest to the State

Recommendation: Areas of high-priority habitat for migratory bird species of high federal interest and essential wildlife habitat for resident species of high interest to the State were identified through a habitat mapping process involving consultation with the U.S. Fish and Wildlife Service and North Dakota Game and Fish Department. Designate specific acreage unsuitable where it has been determined that these habitats cannot be mined without causing significant long-term adverse impacts to the wildlife species in question. Designate as suitable with stipulations high-priority or essential habitats where restoration or replacement will prevent significant long-term adverse impacts to such species. The lease stipulations should require that such habitats be restored or replaced as agreed upon by appropriate state and federal regulatory agencies. Areas identified as unsuitable and suitable with stipulations are mapped in detail on 1:24,000 scale maps available for public inspection at the Dickinson District Office. Map 19 shows an approximation of these areas.

Rationale: Federal regulations require that wildlife habitat identified in the manner above be reviewed for exceptions and exemptions. It has been determined that those areas identified as unsuitable cannot be mined without causing significant long-term adverse impacts to the wildlife species in question, but the areas identified as suitable with stipulations can be mined and


1 0 1 2 3 4 5 6
Scale In Miles
LEWIS & CLARK RECREATION AREA
TOBACCO GARDEN STATE GAME MANAGEMENT AREA
SAKAKAWEA
LAKE
T154N
T153N
T152N
T151N
THIRTEENTH
MISSOURI
R99W
R98W
R97W
TOBACCO GARDEN COAL DEPOSIT
Unsuitability Criteria 14 and 15
Criteria 14 and 15: Wildlife — Unsuitable
Federal Coal Reservation
Criteria 14 and 15: Wildlife — Suitable with Stipulations
N

restored without causing significant long-term adverse impacts.

Criterion 19: Alluvial Valley Floors

Recommendation: Alluvial valley floors (AVF) are unsuitable; however, since final delineation cannot be done until mining plan time, application of this criterion is deferred. Map 20 shows preliminary designations of AVF.

Rationale: Information is insufficient at this time to make final determinations on the AVF potentially associated with Tobacco Garden Creek. It has not yet been determined whether or not protection of these potential AVF is needed and to what extent. The maximum extent of unsuitability designation will not be more than that shown on Map 20.

II. Resource Trade-Offs

Recommendation: The area along the shoreline of Lake Sakakawea that is depicted in Map 20 is unacceptable for further consideration for coal leasing.

Rationale: Lake Sakakawea is the largest and best quality surface water body in the State and is also the most highly developed recreational resource. A buffer is necessary to protect the quality of the edgewaters of the lake and also to ensure the quality of recreational experiences.

Recommendation: The areas with high concentrations of steep slopes (shown in Map 21) are unacceptable for further consideration for coal leasing.

Rationale: The breaks and buttes topography found in this coal deposit is a unique feature and has high aesthetic value to people living in North Dakota. The broken topography in these areas also limits the impact of agricultural disturbances, which enhances the opportunity for high-quality wildlife habitat. As a result of that, the areas are valuable for hunting. In order to assure the continued existence of these values and satisfy state reclamation laws, the areas would have to be returned to rough topography if they were mined. It would be very difficult to reconstruct steep topography in high concentrations, due to problems with slope stability and mining economics.

Recommendation: Areas where buried channel aquifers occur (see Map 21) are unacceptable for further consideration for coal leasing.

Rationale: These buried channel aquifers are important water sources with high yields and very good quality. In most areas they are capable of being used as a water source for irrigation as well as domestic and livestock use. The only source of replacement water with comparable quantity and quality for these areas is Lake Sakakawea. It would not be practical to replace this water source by a pipeline from the Lake.

III. Surface Owner Consultation

Recommendation: Exclude from further consideration for leasing those areas identified as having significant surface owner opposition (outlined on Map 22).

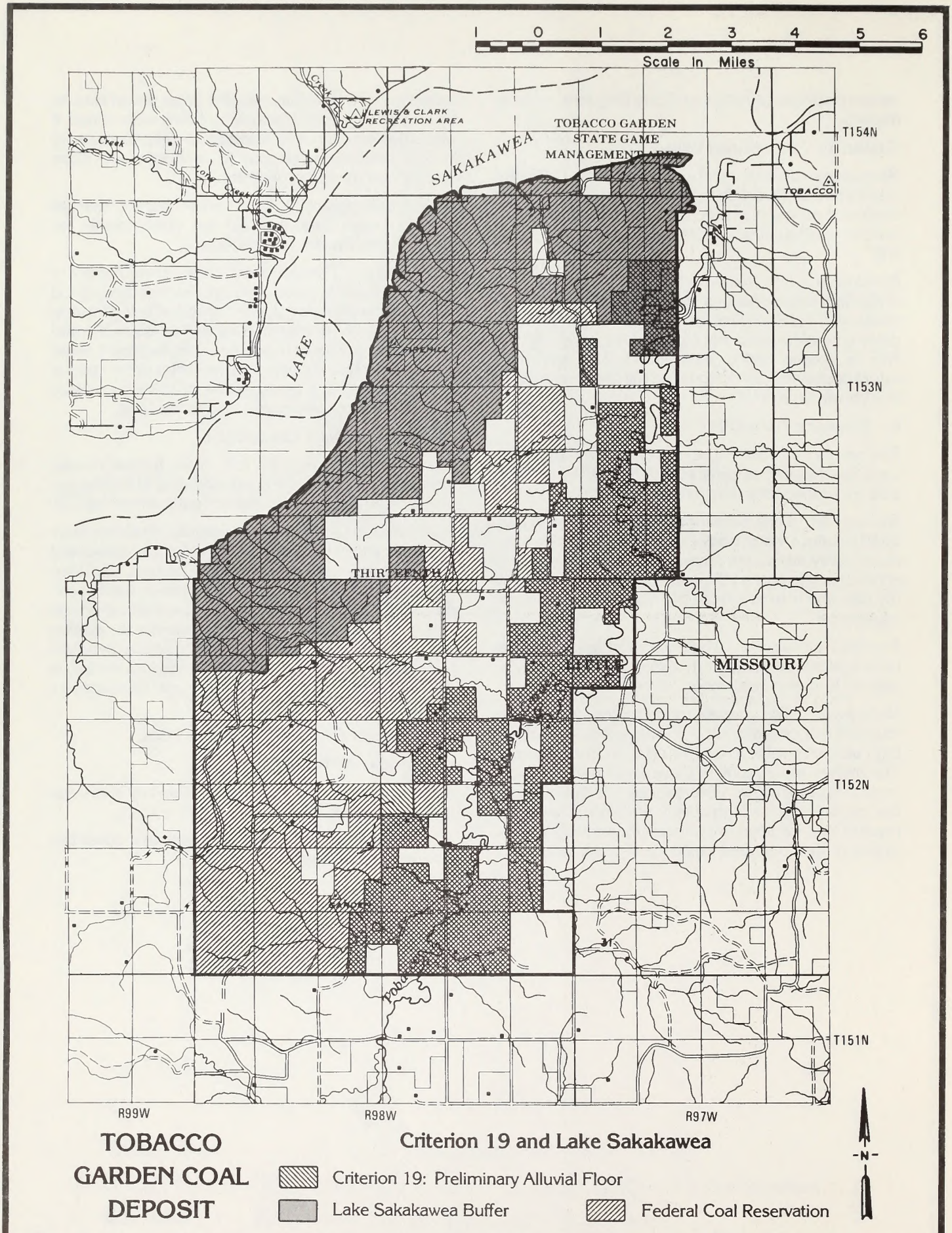
Rationale: Of the approximately 4,760 acres of federal coal within the area, 3,680 acres are associated with surface owner opposition, or 77 percent. Considering federal and non-federal coal together, the opposition affects 68 percent of the area. There are no private coal leases or surface lease agreements for mining within the area. Only 12 percent of the area is underlain with non-federal coal, so federal leasing decisions would control whether or not major coal development could occur.

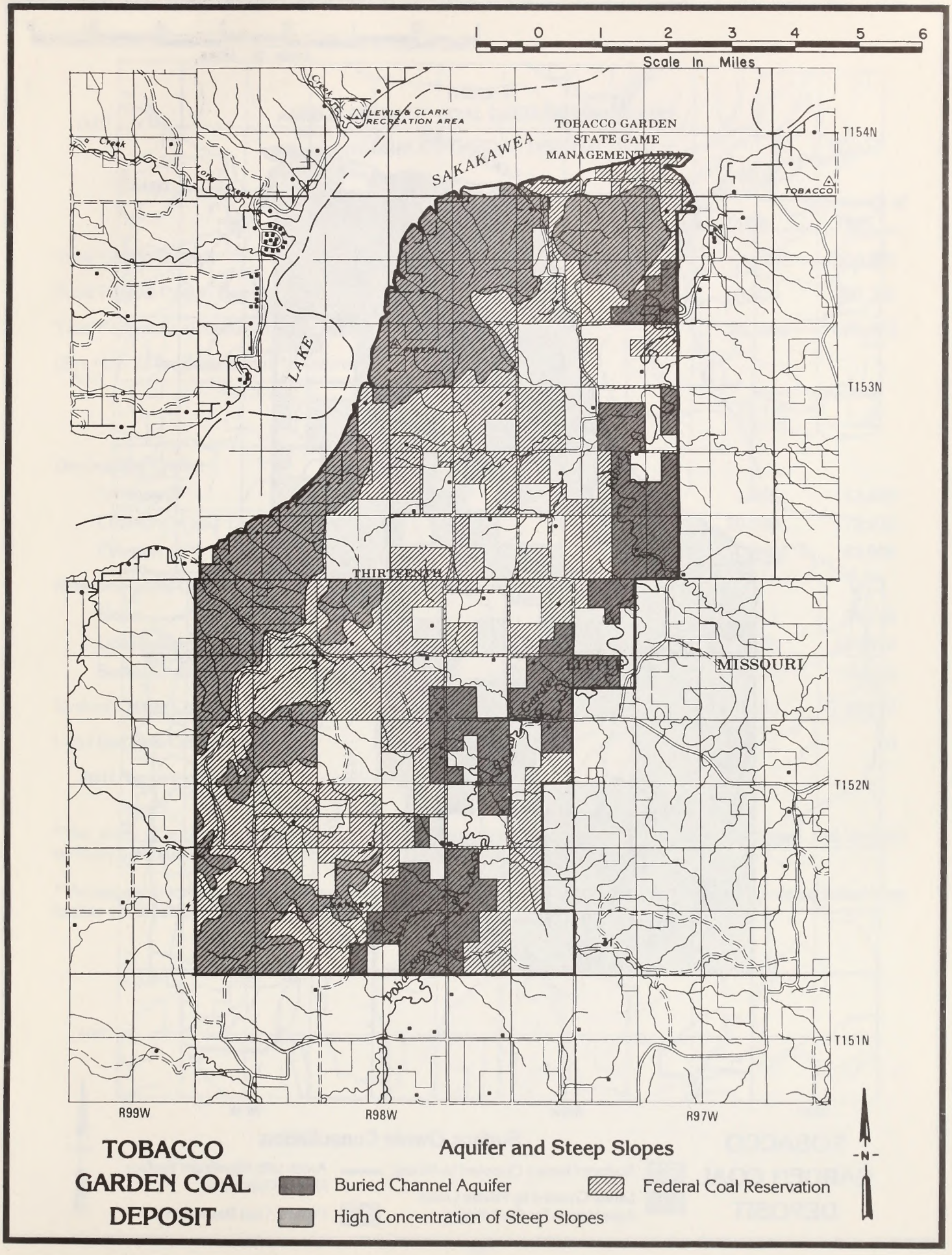
See Appendix F for consultation statistics.

IV. Land Use Plan Consistency

Recommendation: Do not exclude any areas due to land use plans developed by other entities.

Rationale: No other land use plans that cover this area have been identified.


1 0 1 2 3 4 5 6
Scale In Miles
LEWIS & CLARK RECREATION AREA
TOBACCO GARDEN STATE GAME MANAGEMENT AREA
SAKAKAWEA
LAKE
T154N
T153N
T152N
T151N
THIRTEENTH
MISSOURI
R99W
R98W
R97W
N
TOBACCO GARDEN COAL DEPOSIT
Criterion 19 and Lake Sakakawea
Criterion 19: Preliminary Alluvial Floor
Lake Sakakawea Buffer
Federal Coal Reservation


1 0 1 2 3 4 5 6
Scale In Miles
LEWIS & CLARK RECREATION AREA
TOBACCO GARDEN STATE GAME MANAGEMENT AREA
SAKAKAWEA
LAKE
PIERRE
THIRTEENTH
LITTLE
MISSOURI
T154N
T153N
T152N
T151N
R99W
R98W
R97W
TOBACCO GARDEN COAL DEPOSIT
Aquifer and Steep Slopes
Buried Channel Aquifer
Federal Coal Reservation
High Concentration of Steep Slopes
N

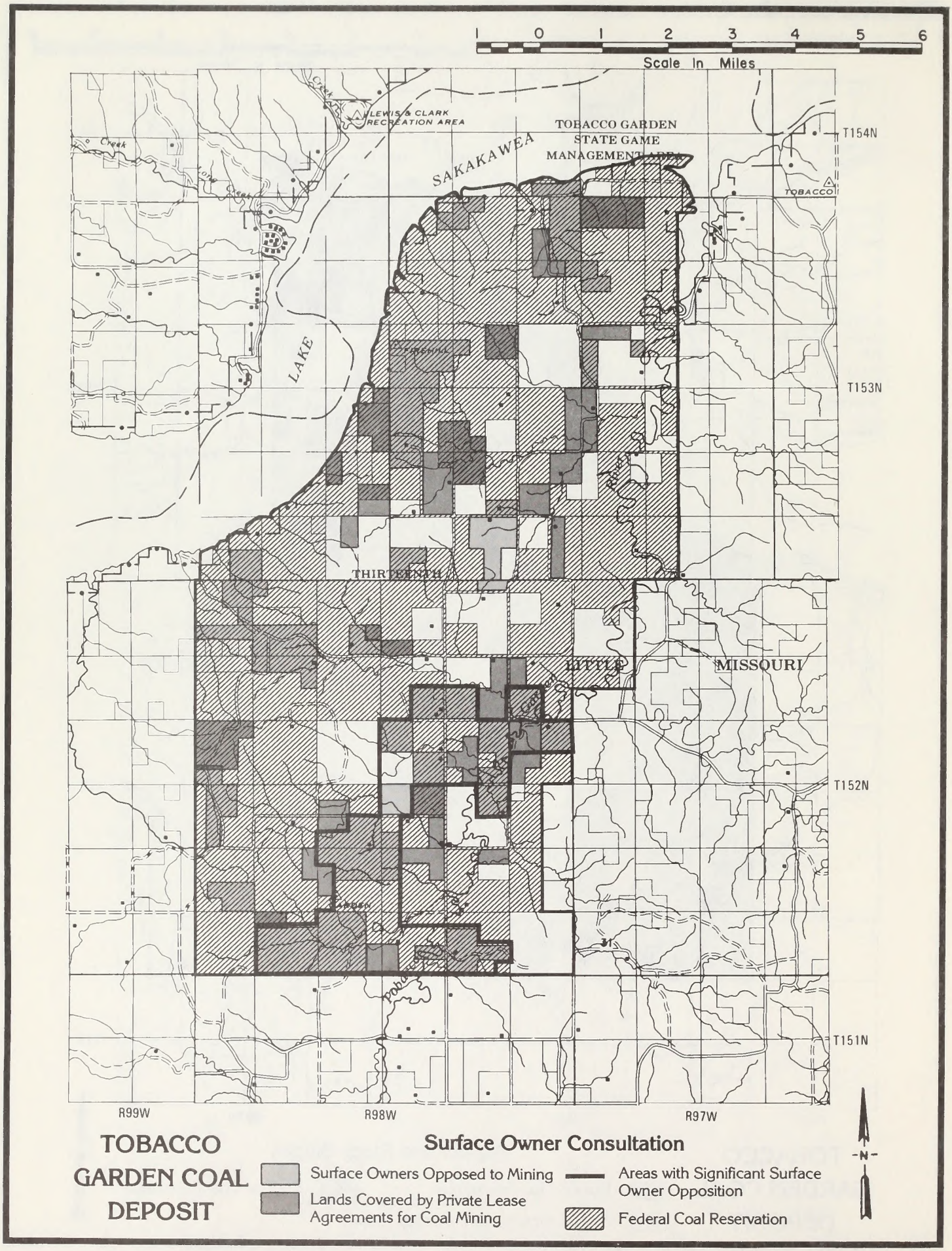

1 0 1 2 3 4 5 6
Scale In Miles
LEWIS & CLARK RECREATION AREA
TOBACCO GARDEN STATE GAME MANAGEMENT AREA
SAKAKAWEA
LAKE
TOBACCO
T154N
T153N
T152N
T151N
THIRTEENTH
LITTLE
MISSOURI
R99W
R98W
R97W
N
TOBACCO GARDEN COAL DEPOSIT
Surface Owner Consultation
Surface Owners Opposed to Mining
Lands Covered by Private Lease Agreements for Coal Mining
Areas with Significant Surface Owner Opposition
Federal Coal Reservation

TABLE VI
APPLICATION OF COAL EXCLUSION SCREENS
TOBACCO GARDEN DEPOSIT

	Acres	Thousands of Tons
Total Coal In Deposit	43,440	369,880
Total Federal Coal In Deposit	32,920	280,300
Total Federal Coal Excluded From Further Consideration*	26,300	225,523

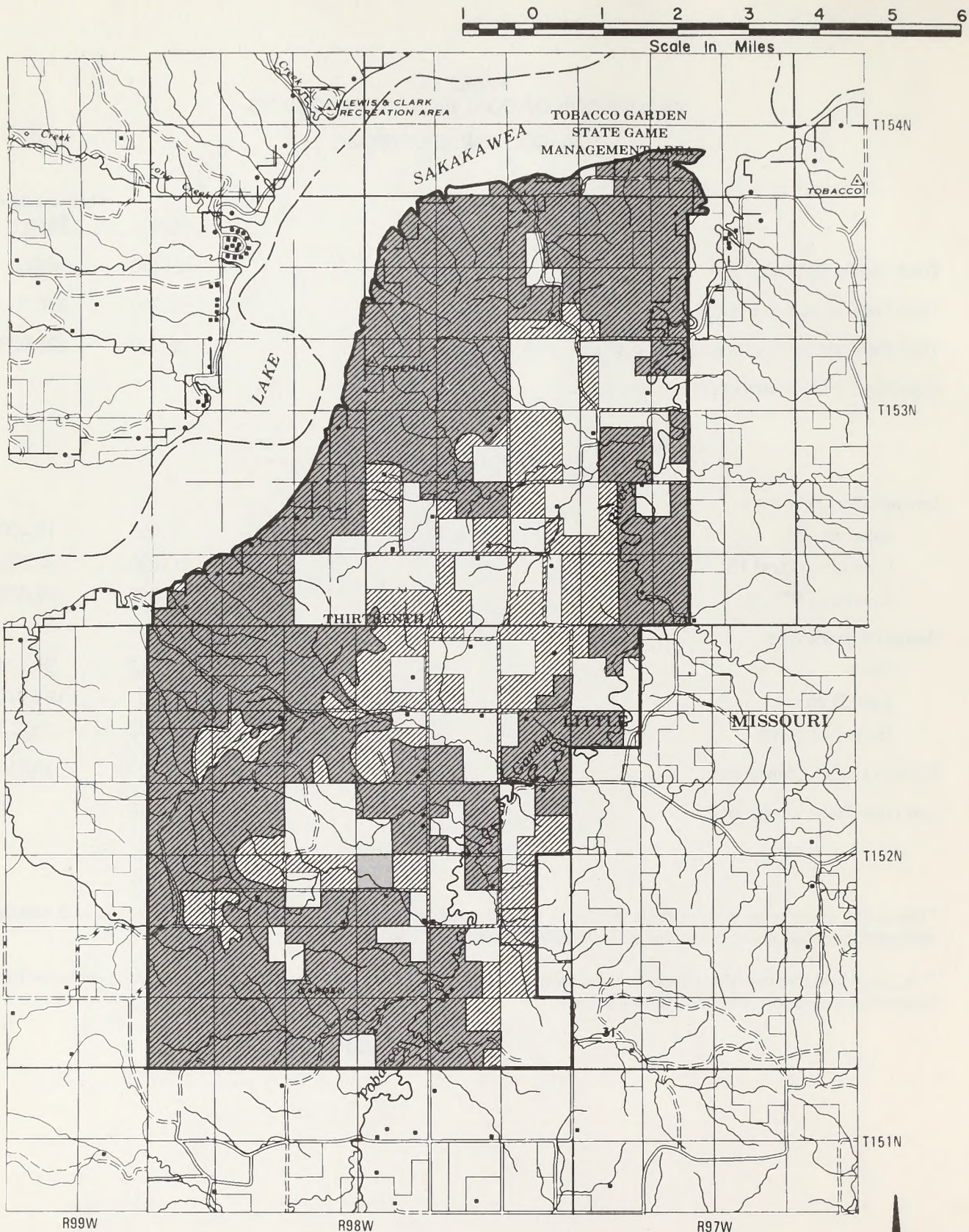
(See Map 23 for illustration of the above.)

EXCLUSIONS BY SCREEN

Unsuitability Criteria		
Criterion 3**	1,455	12,400
Criterion 14 and 15	20,090	172,272
Criterion 19**	10,240	87,808
Resource Trade-Offs		
Slope	11,211	96,134
Lake Buffer	12,230	104,872
Buried Channel	6,440	55,223
Surface Owner Consultation	4,760	40,817
Land Use Plan Consistency	0	0

*The sums of acreage and tonnage amounts for individual screens do not equal the total acreage and tonnage excluded, because some areas are excluded by more than one screen.

**Acreage and tonnage estimates for Unsuitability Criteria 3 and 19 are not included in the total area excluded from further consideration (see recommendations).



TOBACCO GARDEN COAL DEPOSIT

Cumulative Effect of Screens

Areas Excluded from Further Consideration for Coal Leasing

Federal Coal Reservation

Recommendation: All federal coal in this deposit is available for further consideration for leasing except for those lands excluded by the application of the following screens.

Rationale: The screening process described in the federal coal management regulations was applied to this coal deposit. Certain areas were excluded from further consideration for leasing upon the application of the required screens. Once these screens are applied and appropriate areas excluded, the remainder of the federal coal in the deposit is acceptable for further consideration for leasing.

Application of Screens: Recommendations

I. Unsuitability Criteria

General:

Recommendation: Do not exclude any federal coal lands from further consideration for leasing based on criteria numbers 1, 2, 4, 5, 6, 8, 9, 10, 11, 13, 16, 17, 18, 19, and 20.

Rationale: The Bennie Peer Deposit does not contain the resources or conditions addressed by these criteria.

Criterion 3: Buffer Zones along Rights-Of-Way and Adjacent to Communities and Buildings

Recommendation: The following areas are unsuitable for mining: lands within 100 feet of the outside line of the rights-of-way of public roads; within 100 feet of cemeteries; and within 300 feet of occupied dwellings, schools, churches, community or institutional buildings, and public parks. The acreage of these areas was estimated in this plan (see Table VII). However, these areas will be considered suitable pending further study during activity planning to determine more exact locations and to consider application of the exceptions and exemption through negotiations with affected entities and land owners in accordance with the Surface Mining Control and Reclamation Act (SMCRA).

Rationale: These areas are small, numerous, and randomly distributed throughout this deposit; therefore, applying this criterion at this time could have a significant effect on the locations of logical mining units. It is more practical to determine exceptions and negotiate exemptions as consideration passes through activity planning to application of stipulations during mine plan evaluation.

Criterion 7: Historic Land and Sites

Recommendation: No areas are excluded from further consideration for leasing at this time due to this criterion.

Rationale: No areas have been identified as being on or eligible for the National Register of Historic Places at this time; however, as further information is gathered at the activity planning and mine plan stages, additional areas could be identified as being unsuitable under this criterion.

Criterion 12: Bald and Golden Eagle Winter Roost and Concentration Areas

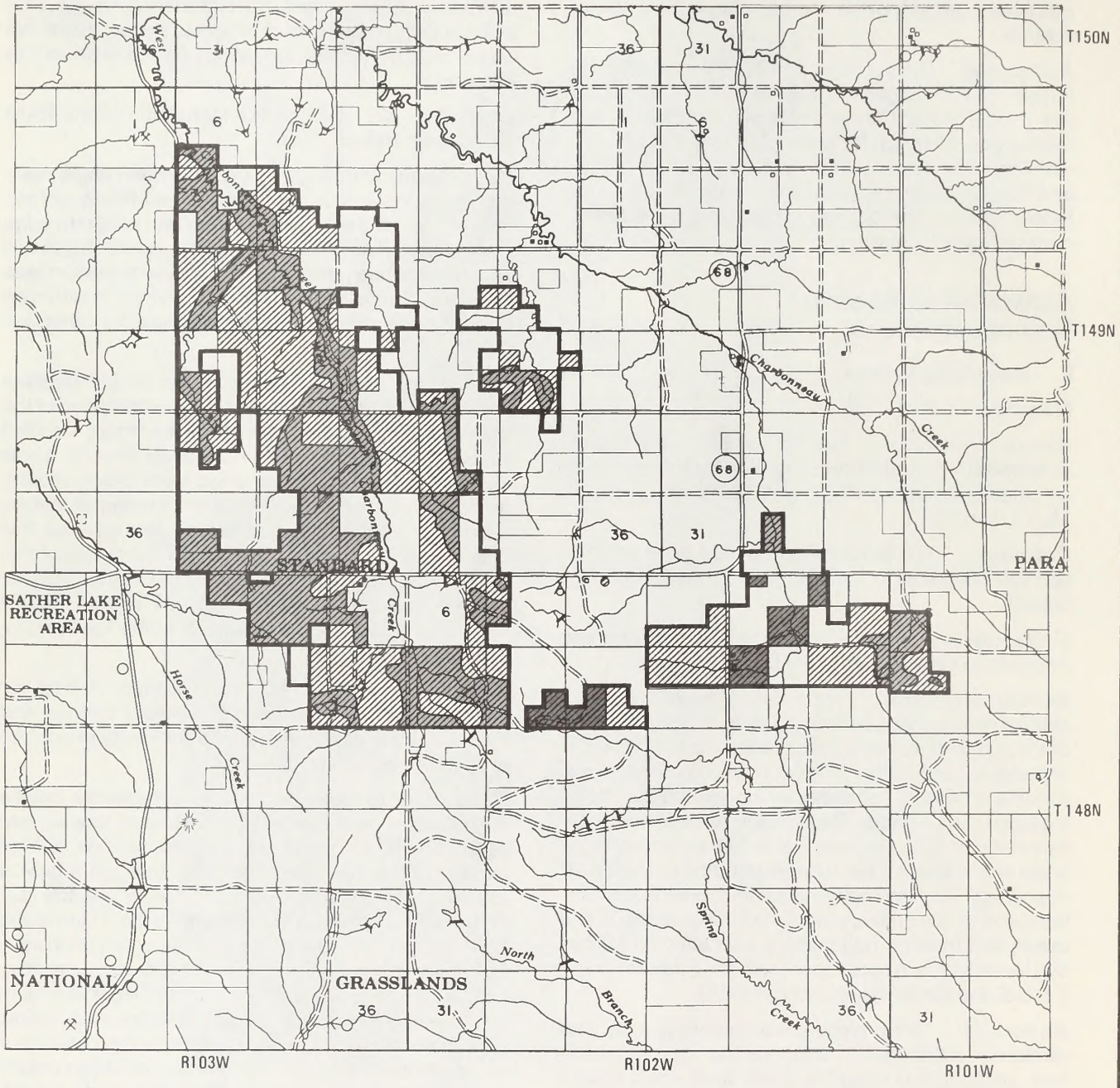
Recommendation: An area of golden eagle nests that supports a concentration of wintering golden eagles is located along the western and southern edge of this deposit and is unsuitable. The exact size of this area has not been determined, because the entire area considered unsuitable due to this criterion is within an area being recommended for exclusion for other reasons.

Rationale: Regulations require that such concentration areas be declared unsuitable. Determination of the exact size of this area would involve more detailed consultation with the Fish and Wildlife Service. It was decided that, since these areas were being recommended for exclusion based on other resource values, it was not appropriate at this time to carry out this detailed consultation process. In the event any of this area is included in the activity planning stage, consultation will be completed with the U.S. Fish and Wildlife Service to determine the biological buffer for this concentration area.

Criterion 14 and 15: High-Priority Habitat for Migratory Bird Species of High Federal Interest and Fish and Wildlife Habitat Essential for Resident Species of High Interest to the State

Recommendation: Areas of high-priority habitat for migratory bird species of high federal interest and essential wildlife habitat for resident species of high interest to the State were identified through a habitat mapping process involving consultation with the U.S. Fish and Wildlife Service and North Dakota Game and Fish Department. Designate specific acreage unsuitable where it has been determined that these habitats cannot be mined without causing significant long-term adverse impacts to the wildlife species in question. Designate as suitable with stipulations high priority or essential habitats where restoration or replacement will prevent significant long-term adverse impacts to such species. The lease stipulations should require that such habitats be restored or replaced as agreed upon by appropriate state and federal regulatory agencies. Areas identified as unsuitable and suitable with stipulations are mapped in detail on 1:24,000 scale maps available for public inspection at the Dickinson District Office. Map 24 shows an approximation of these areas.

Rationale: Criteria 14 and 15 were considered jointly because analysis for each criterion was based on



BENNIE PEER COAL DEPOSIT

Unsuitability Criteria 14 and 15

- Criteria 14 and 15: Wildlife — Unsuitable
- Criteria 14 and 15: Wildlife — Suitable with Stipulations
- Federal Coal Reservation

-N-

1 2 3 4

Scale In Miles

the same habitat mapping products, and because the migratory bird species of high federal interest were also considered by the State of North Dakota as species of high interest. Federal regulations require that wildlife habitat identified in the manner above be reviewed for exceptions and exemptions. It has been determined that those areas identified as unsuitable cannot be mined without causing significant long-term adverse impacts to the wildlife species in question, but the areas identified as suitable with stipulations can be mined and restored or replaced without causing significant long-term adverse impacts. It is assumed that reasonable stipulations for habitat restoration or replacement will be agreed upon which will not preclude mining in the areas identified as suitable with stipulations.

II. Resource Trade-Offs

Recommendation: Do not exclude any areas due to other resource values.

Rationale: No other resource values significant enough to preclude leasing were identified.

III. Surface Owner Consultation

Recommendation: Exclude from further consideration for leasing those areas identified as having significant surface owner opposition (outlined on Map 25).

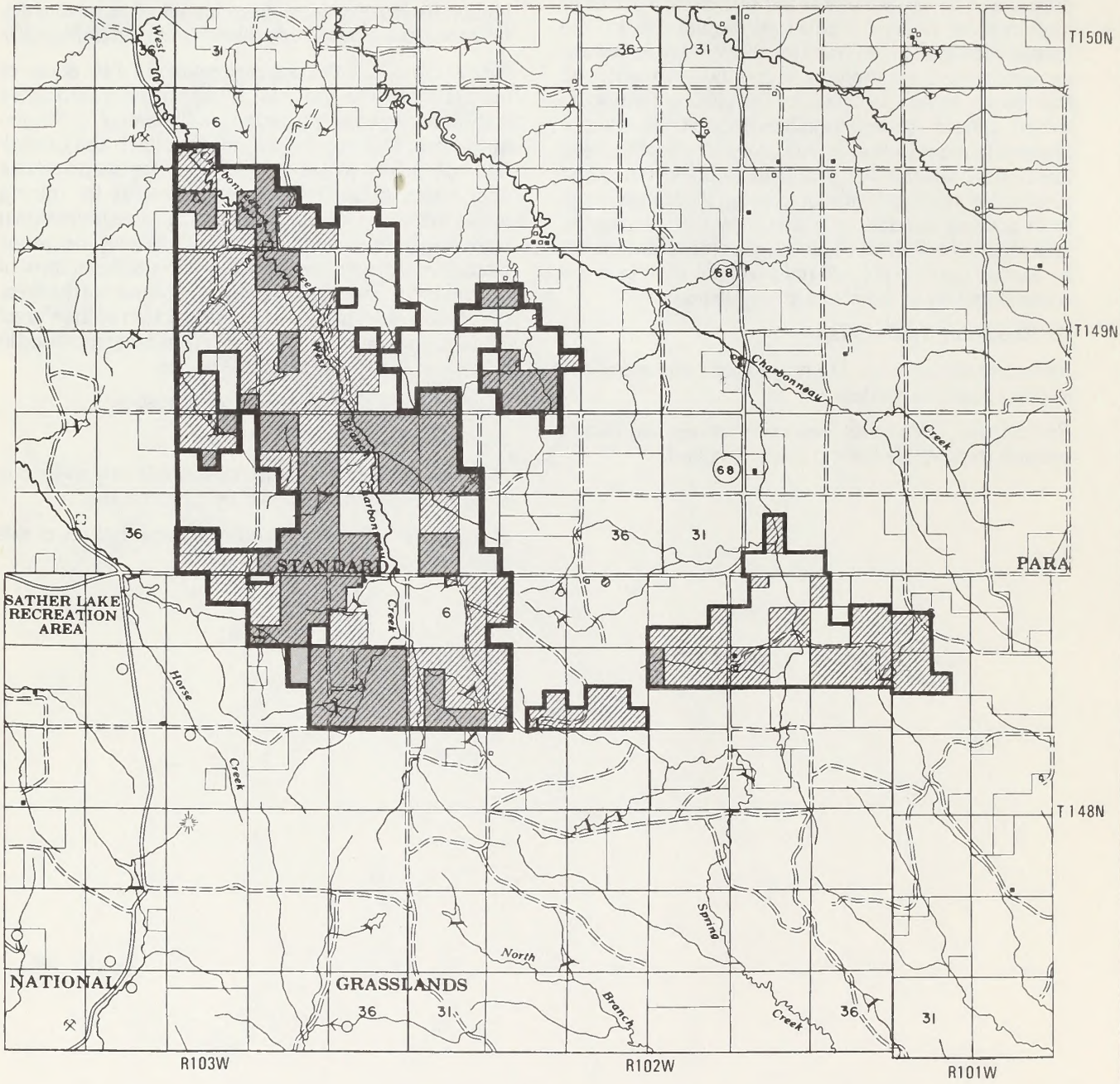
Rationale: Of the approximately 11,140 acres of federal coal within the area, 4,840 acres are associated with surface owner opposition, or 43 percent. Considering federal and non-federal coal together, the opposition affects 34 percent of the area. There are no private coal leases or surface lease agreements for mining within the area. Only 22 percent of the area is underlain with non-federal coal, so federal leasing decisions would control whether or not major coal development occurs in the area. On adjacent lands south of the area, which are under the planning jurisdiction of the Forest Service, surface owner opposition has been recorded in a block of approximately 2,500 acres.

See Appendix F for consultation statistics.

IV. Land Use Plan Consistency

Recommendation: Do not exclude any areas due to land use plans developed by other entities.

Rationale: No other land use plans that cover this area have been identified.



BENNIE PEER COAL DEPOSIT

Surface Owner Consultation

Federal Coal Reservation

Surface Owners Opposed to Mining

Areas with Significant Surface Owner Opposition

-N-

1 2 3 4

Scale In Miles

TABLE VII
APPLICATION OF COAL EXCLUSION SCREENS

BENNIE PEER DEPOSIT

	Acres	Thousands of Tons
Total Coal In Deposit	15,640	183,880
Total Federal Coal In Deposit	11,600	139,270
Total Federal Coal Excluded From Further Consideration*	9,959	111,666

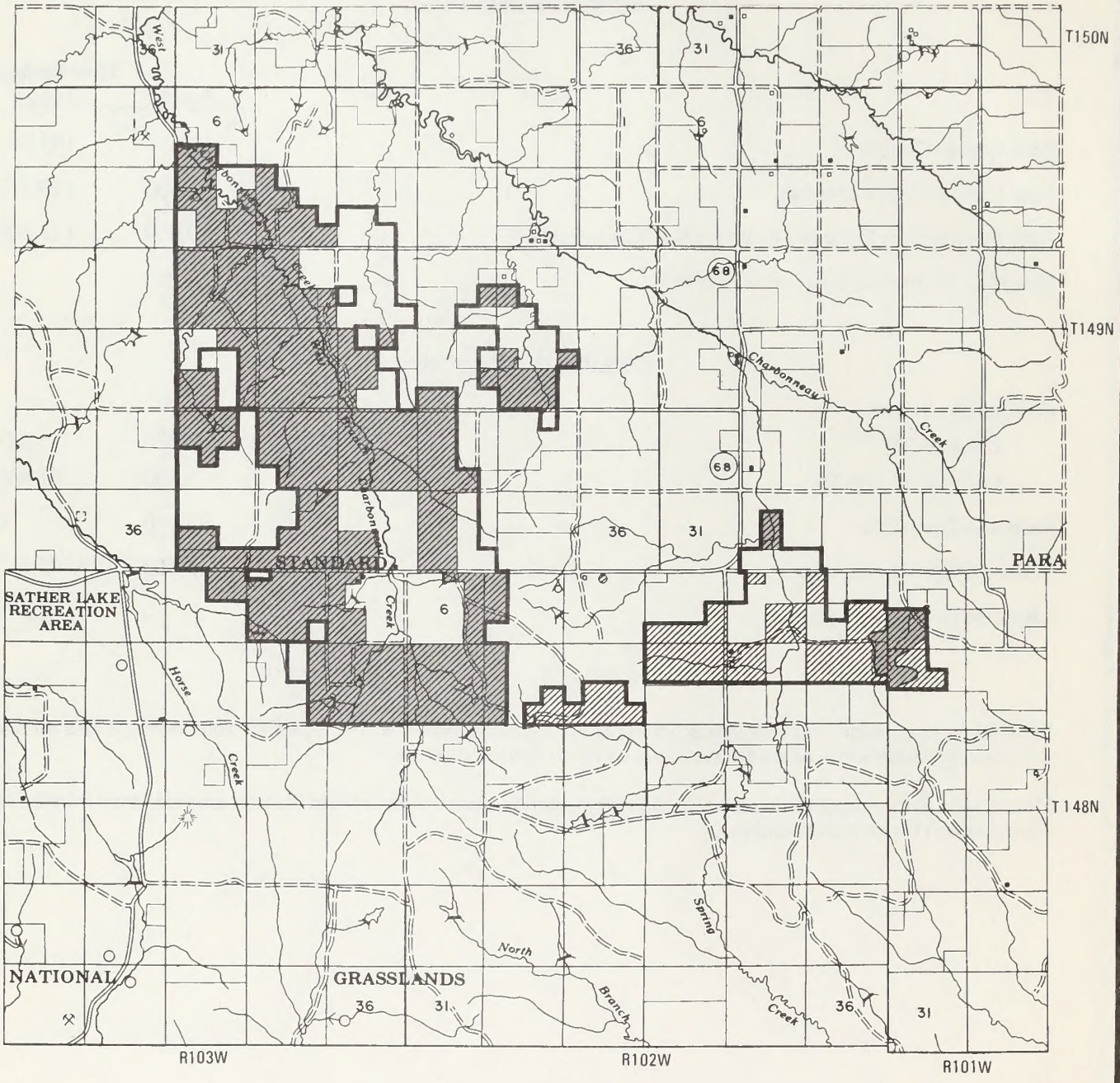
(See Map 26 for illustration of the above.)

EXCLUSIONS BY SCREEN

Unsuitability Criteria		
Criterion 3**	1,320	15,847
Criterion 14 and 15	5,290	61,460
Resource Trade-Offs	0	0
Surface Owner Consultation	9,563	107,303
Land Use Plan Consistency	0	0

*The sums of acreage and tonnage amounts for individual screens do not equal the total acreage and tonnage excluded, because some areas are excluded by more than one screen.

**Acreage and tonnage estimates for Unsuitability Criterion 3 are not included in the total area excluded from further consideration (see recommendation).



BENNIE PEER COAL DEPOSIT

Cumulative Effects of Screens

Areas Excluded from Further Consideration for Coal Leasing

Federal Coal Reservation

-N-

1 2 3 4

Scale In Miles

SUMMARY

Three of the six coal deposits in the planning area lie within Williams and Divide counties. Of the three, the Williston Deposit contains the largest estimated tonnage of federal coal. Total coal reserves in that deposit are approximately 2.78 billion tons, over half of which is federal. In the Hanks and Sand Creek deposits less than half of the coal is federal. Application of the coal exclusion screens in Williams and Divide counties resulted in approximately 48 percent of the federal coal being excluded from further consideration for leasing. A comparison of the three deposits shows that the Williston Deposit was the most severely impacted, with approximately 67 percent of the federal coal excluded. By comparison, 37 percent and 26 percent of the total federal coal reserves were excluded from the Hanks and Sand Creek deposits, respectively.

The areas in the three deposits which were excluded from further consideration were affected in many cases by the application of more than one screen. Unsuitability criteria 14 and 15 (wildlife) excluded the largest percentage of federal coal tonnage. Areas excluded by other resource trade-offs in many cases overlapped with unsuitability criteria exclusions. The major resource trade-offs involved were: slope, buried channel aquifers, lake buffer zones, wildlife refuge watersheds, and a proposed buffer zone around the North Dakota State Agricultural Experiment Station—Williston branch. Surface owner consultation and land use plan consistency also resulted in some exclusions.

Of the three coal deposits in McKenzie County, the Keene Deposit is the largest, with total coal reserves of 2 billion tons. Over half of the total coal reserves in the three deposits is federal. The coal exclusion screens were not applied in the Keene Deposit, because the federal coal reserves there were deferred from leasing until development of the coal resource would no longer be in conflict with oil and/or gas production. Application of the coal exclusion screens in the Tobacco Garden and Bennie Peer deposits resulted in only 20 percent of the total federal coal reserves carried forward for further consideration for leasing.

Exclusion areas in the Tobacco Garden and Bennie Peer deposits were affected in many cases by the application of more than one screen. Wildlife criteria 14 and 15 excluded a large percentage of the federal coal in both deposits. Areas excluded by other resource trade-offs in the deposits overlapped with exclusions based on unsuitability criteria. Slope, buried channel aquifers, and lake buffer zones were major resource trade-offs, and other areas were excluded on the basis of significant surface owner opposition.

The application of coal exclusions screens to the coal deposits in the McKenzie-Williams Planning Area resulted in excluding 36 percent of the total federal coal reserves from further consideration for leasing. Another one-third of the total reserves was deferred from leasing at this time due to oil and gas conflicts. In these areas the coal exclusion screens were not applied. Overall, approximately 1.8 billion tons of coal have been carried forward as acceptable for further consideration. Table VIII displays the results by deposit.

A preliminary assessment of the estimated total reserves of the deposits after the exclusions were made shows that the three deposits in Williams County could support mining operations with reserve bases ranging from 125 million to 500 million tons. Estimated reserve tonnages in McKenzie County which will be carried forward for further consideration are not as extensive. After application of the coal screens, it appears that the Tobacco Garden Deposit might support a mine with a 125-million ton reserve base. To put the tonnages into perspective: a 125-million ton reserve base could supply a 500-megawatt electrical generating station, assuming a 40-year life span for the facility. A 250-million ton reserve base could support a 1000-megawatt electrical generation facility. A 500-million ton reserve base could support a synfuels or gas generation plant. The portion of the Bennie Peer Deposit included in this plan and which is carried forward for further consideration could supply three "small business" operations.

It is impossible at this stage of planning to discuss the viability of coal conversion facilities which might use the coal. During activity planning preliminary leasing tracts are delineated, (partly on the basis of potential conversion facilities), and the probable environmental impacts of developing the tracts are assessed on a site-specific and cumulative basis.

TABLE VIII
CUMULATIVE EFFECTS OF SCREENS

Coal Deposit	Total Federal Coal		Federal Coal Deferred from Leasing		Federal Coal Excluded From Leasing Through Screens		Fedral Coal Acceptable for Further Consideration for Leasing	
	Acres	Thousand of Tons	Acres	Thousand of Tons	Acres	Thousand of Tons	Acres	Thousand of Tons
Keene	130,298	1,585,000	130,298	1,585,000	—	—	0	0
Hanks	48,100	726,400	0	0	18,240	270,400	29,860	456,000
Sand Creek	57,860	975,000	0	0	15,330	250,472	42,530	724,528
Williston	97,320	1,570,900	10,168	142,600	67,770	1,054,422	19,382	373,878
Tobacco Garden	32,920	280,300	0	0	26,300	225,523	6,620	54,777
Bennie Peer	11,600	139,270	0	0	9,959	111,666	1,641	27,604
Totals	378,098	5,276,870	140,466	1,727,600	137,599	1,912,483	100,033	1,636,787

Note: For a specific breakdown by individual screens, see Tables II, III, V, VI, and VII.

OIL AND GAS

Objective: Make all BLM-administered oil and gas reserves in this planning area available for exploration and development. Assure that exploration and development activities are carried out in such a way as to minimize environmental damage.

Rationale: This objective is mandated by the "Mining and Minerals Policy Act of 1970" that declares it to be the policy of the federal government to encourage the development of the domestic minerals industry. (See rationale for coal objective in coal section.)

Recommendation: Make available for exploration and leasing all of the lands in the planning area on which the oil and gas is federally owned and administered by BLM. Stipulations will be developed for leases and development plans on a case-by-case basis. Stipulations imposed should be the minimum required to provide adequate protection of other resources.

Rationale: Large portions of the planning area have not been fully evaluated for oil and gas. With the critical need for energy resources, as many areas as possible must be made available, while at the same time assuring that surface resource values are protected. Impacts resulting from oil and gas development normally can be mitigated through lease and development plan stipulations.

MISCELLANEOUS MINERALS

Objective: Develop a geology, energy and minerals (GEM) inventory program, so that the extent, quality, and accessibility can be determined of the limited amounts of minerals that the BLM controls other than coal and oil and gas. Where potentially economic amounts of these minerals occur, make them available for development. Mineral resources in this category include, but are not limited to: uranium, geothermal energy, salt, potash, sodium sulfate, sand and gravel, scoria, stone, and clay.

Rationale: The above-mentioned minerals and mineral materials are known to exist or possibly exist in the planning area. Some of these minerals are important at the present time, and others will become increasingly important in the future.

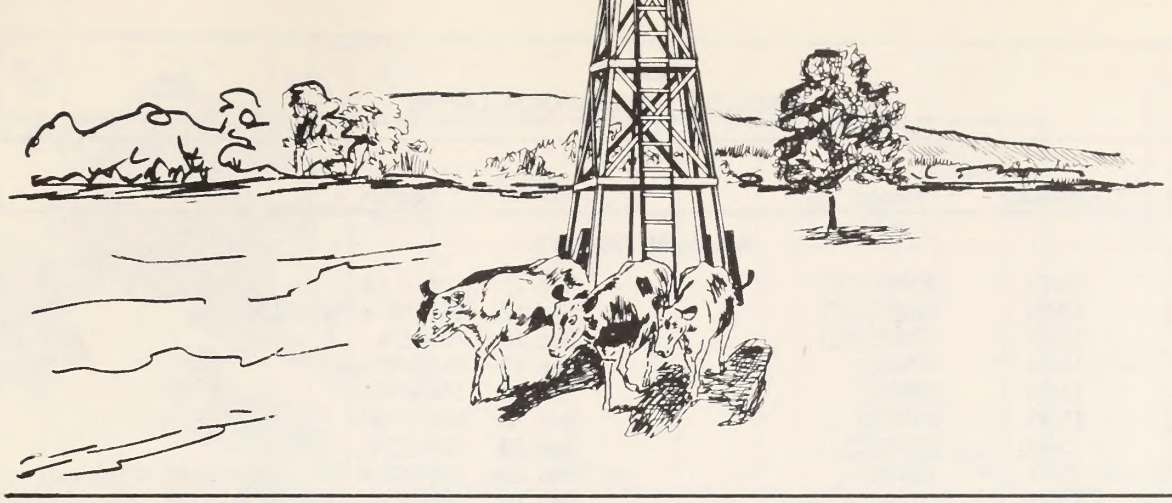
In the future, improved processing and mining methods will allow the development of lower grade deposits. Industrial development will also increase the demand for mineral materials, which may be partially supplied from federally controlled sources.

Recommendation: Prepare a basic data file for minerals other than coal and oil and gas in this planning area. This file is to be started this fiscal year and updated as needed.

Rationale: Little is known about these resources and interest in them could grow in the future. This file would supply the basic minerals data needed for a number of possible future actions. These include mineral leases, exchanges, and material sales.

Recommendation: Federally controlled minerals other than coal and oil and gas must be made available for private industry, local governments, and private individuals if requested. Applications will be handled on a case-by-case basis, and the protection of resource values will be addressed.

Rationale: Minerals are necessary for the continued growth, development and maintenance of the Nation. Their availability must be assured where necessary, but not at the loss of more valuable resources.



3

SCATTERED TRACTS

BACKGROUND

The lands on which the Bureau of Land Management administers both the surface and minerals estate (sometimes referred to as "surface" lands) make up a tiny portion of North Dakota. These lands were never in private ownership.

When North Dakota was being settled, there was not a master plan to ensure that every acre would go into private ownership. The homesteaders filed on what they wanted and needed, and a small amount of land remained in the public domain for a variety of reasons.

What can be said in general about BLM surface lands in North Dakota, applies to the BLM tracts in the McKenzie-Williams Planning Area: they are mostly odds and ends, scattered widely, and it is unlikely that the general public is aware of their locations.

The BLM has been concerned with the need for land pattern adjustment for many years. Of the 68,000 acres of public land managed by BLM in North Dakota, some 46,000 acres exist in a scattered pattern of relatively small tracts, ranging from less than 40 acres to 160 acres. The McKenzie-Williams Planning Area has 57 separate parcels totalling 3,025.2 acres.

To accomplish the objective of making the management of both public and adjacent private lands more effective and efficient, it is necessary to adjust the scattered or fragmented pattern of BLM lands. Lands in this planning area have been reviewed and placed into one of three categories, using criteria found in *State Director Guidance for Resource Management in Montana and the Dakotas* (published in April 1983). These three categories are: disposal (sale, exchange, or transfer); retention; and further study. Criteria for categorization of BLM lands are found in Appendix G.

The BLM currently uses a minimal or "custodial" management approach for these lands. The following recommendations would, if they are adopted, result in a different management philosophy for the scattered tracts. The recommendations are grouped according to "programs," such as lands (realty) and minerals. The overall objectives for each program precede the recommendations.

LANDS

Objective: To improve the effectiveness and efficiency of public land management through an analysis of resource values and management opportunities on scattered tracts in the McKenzie-Williams Planning Area. To provide for implementation of a long-term land base adjustment program for the public lands by grouping them into three categories: disposal (sale, transfer, or exchange); retention; and further study. Sell or transfer those public lands which could attain a higher and better use in the private sector or through management by another public agency; retain those public lands with identified public values; and adjust BLM land pattern where possible to get the most public value for the money invested.

Rationale: BLM has been concerned with the need for land base adjustment for many years. The public land pattern in the planning area is fragmented, with most tracts ranging in size from less than 40 to 160 acres. The BLM is authorized to enter into land base adjustments through the Federal Land Policy and Management Act of 1976 and other public land laws.

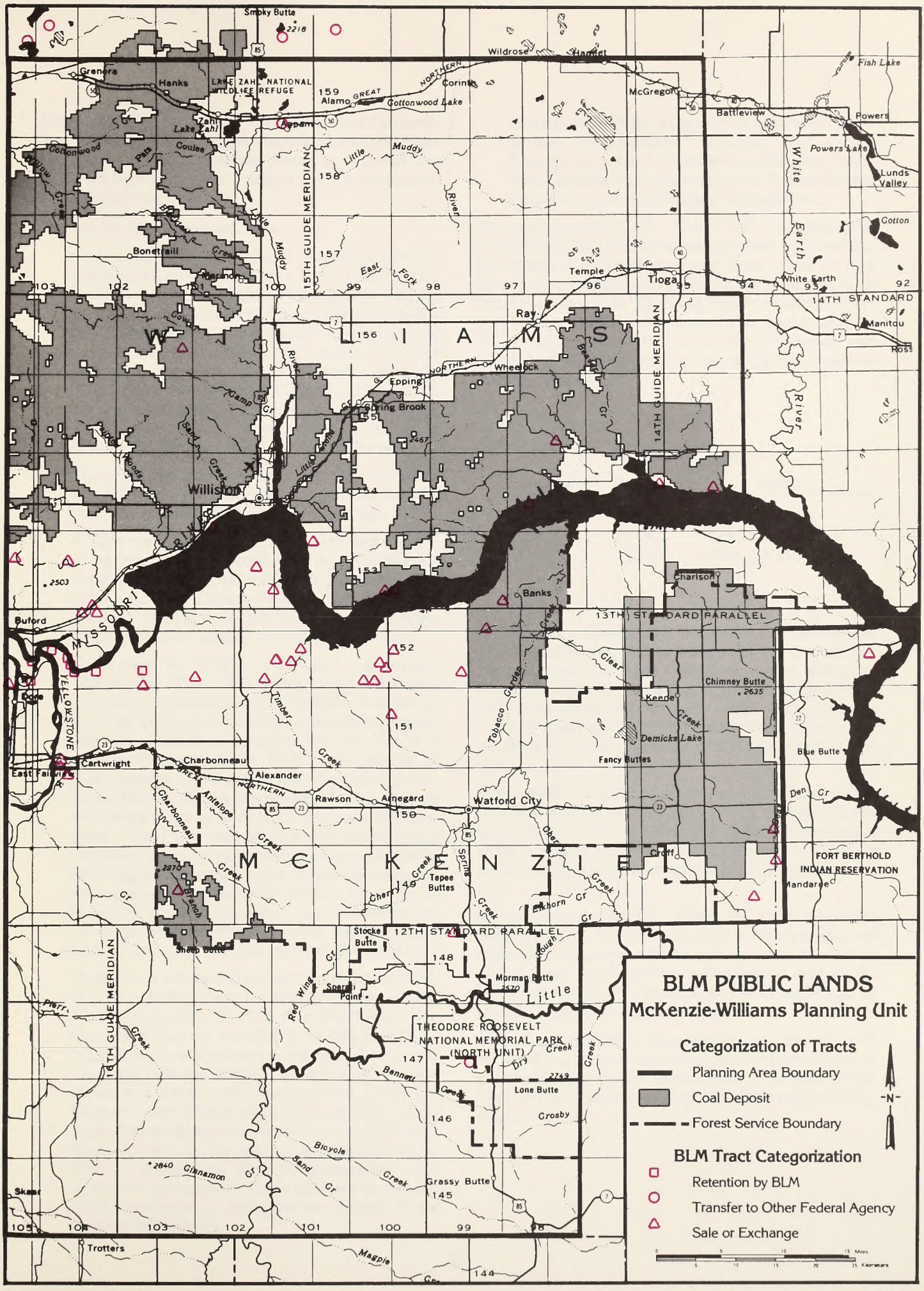
Recommendation A: Dispose of the lands described in Table IX (see also Map 27). Methods of disposal include sale or exchange and transfer to another federal agency. All mineral rights shall be retained in federal ownership. This recommendation does not preclude the option of reclassifying these lands or changing management based on new data or policy changes. Land identified for transfer to the Forest Service and not transferred before October 1, 1987, will be available for disposal to the general public.

TABLE IX
CATEGORIZATION OF DISPOSAL LANDS

Disposal Category	Township	Range	Section	
		WILLIAMS COUNTY		
S/E	154N	95W(OGC)	Sec. 7:	Lots 2,3,4
S/E	154N	96W(OGC)	Sec. 12:	SE¼NE¼, NE¼SE¼
S/E	154N	95W(OGC)	Sec. 10:	N½SE¼
S/E	154N	97W(C)	Sec. 17:	SW¼NE¼
S/E	153N	99W(C)	Sec. 28:	NW¼NE¼
S/E	153N	99W(C)	Sec. 28:	NW¼NW¼
S/E	154N	100W(C)	Sec. 33:	SE¼SE¼
S/E	154N	101W	Sec. 29:	SW¼SE¼ (that portion north of railroad)
S/E	156N	102W(C)	Sec. 14:	NE¼SW¼, NW¼SE¼
S/E	153N	103W	Sec. 9:	NW¼NE¼
S/E	153N	103W	Sec. 26:	SW¼NW¼
S/E	153N	103W	Sec. 26:	NE¼SW¼
S/E	153N	103W	Sec. 27:	NE¼SW¼
S/E	153N	104W	Sec. 10:	Lot 1
S/E	155N	97W	Sec. 21:	SE¼SE¼
S/E	154N	95W	Sec. 7:	Lots 2, 3, 4
BR/FWS	159N	100W	Sec. 22:	SE¼NE¼, SE¼NW¼, S½SW¼, N½SE¼, SW¼SE¼, NE¼SW¼
		DIVIDE COUNTY		
BR/FWS	160N	100W	Sec. 22:	SW¼NE¼, NW¼SE¼
BR/FWS	160N	103W	Sec. 15:	W½NW¼, NW¼SW¼
BR/FWS	160N	103W	Sec. 21:	NE¼NW¼
BR/FWS	160N	99W	Sec. 5:	SW¼SE¼
		MCKENZIE COUNTY		
S/E	152N	93W	Sec. 8:	Lot 4
S/E	149N	95W(OGC)	Sec. 1:	Lot 1
S/E	149N	95W(OGC)	Sec. 10:	SE¼SE¼
S/E	150N	95W(OGC)	Sec. 24:	Lot 4
S/E	150N	95W(OGC)	Sec. 25:	Lot 1
S/E	152N	98W(C)	Sec. 5:	Lots 10, 11, 12
S/E	149N	99W	Sec. 35:	NE¼NE¼
S/E	151N	99W	Sec. 6:	Lot 5
S/E	152N	99W	Sec. 7:	Lot 3
S/E	152N	99W	Sec. 24:	NW¼NE¼
S/E	152N	101W	Sec. 12:	NW¼SE¼
S/E	152N	101W	Sec. 14:	SW¼SW¼
S/E	152N	101W	Sec. 14:	SE¼SE¼
S/E	152N	101W	Sec. 22:	SE¼NW¼
S/E	153N	101W	Sec. 10:	SE¼SE¼
S/E	149N	102W(C)	Sec. 17:	NE¼SE¼
S/E	152N	102W	Sec. 21:	Lot 5
S/E	152N	103W	Sec. 24:	SE¼SW¼
S/E	151N	104W	Sec. 35:	SW¼NE¼, that portion north of the railroad
S/E	152N	104W	Sec. 30:	Lot 1
S/E	153N	98W(C)	Sec. 24:	SW¼SE¼
S/E	153N	98W(C)	Sec. 25:	W½NE¼
S/E	152N	100W	Sec. 24:	SE¼NW¼
S/E	152N	100W	Sec. 24:	SW¼SW¼
S/E	152N	100W	Sec. 25:	W½NW¼
S/E	152N	100W	Sec. 24:	SE¼SE¼
S/E	153N	100W	Sec. 18:	NE¼SW¼, Lot 3
S/E	152N	100W	Sec. 26:	NE¼NW¼
FS	147N	99W	Sec. 22:	NW¼NW¼

Categories:

S/E — Sale or Exchange
BR/FWS — Transfer to Bureau of Reclamation or Fish and Wildlife Service
FS — Transfer to Forest Service
(OGC) — In an area of extensive oil and gas development within a mineable coal deposit
(C) — Within a mineable coal deposit


BLM PUBLIC LANDS
McKenzie-Williams Planning Unit
Categorization of Tracts
Planning Area Boundary
Coal Deposit
Forest Service Boundary
BLM Tract Categorization
Retention by BLM
Transfer to Other Federal Agency
Sale or Exchange
N
WILLIAMS
MCKENZIE
Williston
Watford City
Alexander
Charbonneau
Cartwright
Buford
Ray
Tioga
Temple
Wheelock
Epping
Spring Brook
Banks
Charlson
Keene
Fancy Buttes
Chimney Butte
Demicks Lake
Blue Butte
Rawson
Arnegard
Tepee Buttes
Croff
FORT BERTHOLD INDIAN RESERVATION
Mandaree
Stocke Butte
Sheep Butte
Morman Butte
Spratt Point
Lone Butte
Grassy Butte
Trotters
Skaar
Hanks
Grenora
Wildrose
Hamlet
McGregor
Battleview
Powers
Powers Lake
Fish Lake
Lunds Valley
Cotton
White Earth
Manitou
Ross
Corinth
Alamo
Appam
Zahl
Lake Zahl
LAKE ZAHL NATIONAL WILDLIFE REFUGE
Bonetraill
Smoky Butte
15TH GUIDE MERIDIAN
14TH GUIDE MERIDIAN
16TH GUIDE MERIDIAN
13TH STANDARD PARALLEL
12TH STANDARD PARALLEL
14TH STANDARD
THEODORE ROOSEVELT NATIONAL MEMORIAL PARK (NORTH UNIT)
Missouri River
Yellowstone River
Little Muddy River
East Fork
Little Muddy
Cottonwood Pass
Cottonwood Coulee
Willow Creek
Camp Gr
Sand Woods Creek
Little Beaver Creek
Timber Creek
Tobacco Garden Creek
Clear Creek
Beaver Creek
Antelope Creek
Charbonneau Creek
Cherry Creek
Spring Creek
Otter Creek
Elkhorn Cr
Dough Cr
Red Wing Cr
Pierre Creek
Bennett Creek
Dry Creek
Bicycle Creek
Sand Cr
Cinnamon Cr
Magpie Cr
Little Missouri River
White Earth River
Earth
Den Cr
Timber Creek
Big Muddy Creek
Gowan River
Camp Gr
Sand Woods Creek
Little Beaver Creek
Beaver Creek
Tobacco Garden Creek
Clear Creek
Timber

Lands identified for transfer to the Bureau of Reclamation or Fish and Wildlife Service will be retained if the transfer is not accomplished. Pending disposal, the lands will be managed for multiple use at a low intensity/custodial level.

Rationale (by disposal category):

Sale or Exchange: Tracts categorized for disposal by sale or exchange have limited potential for multiple-use management. Management options on these parcels are limited to low intensity/custodial administration. Cost-effective management beyond this level is clearly not feasible. The tract pattern is scattered. Size of the tracts generally ranges from 40 to 160 acres. Wildlife and livestock grazing are the only documented uses. Potential for management by other public agencies is limited. Wildlife habitat values are moderate.

The scattered tracts identified for disposal which are located within coal deposits account for less than one percent of the total coal tonnage.

Furthermore, in four of the five coal deposits the tracts were excluded from further consideration for leasing on the basis of surface resource trade-offs and unsuitability criteria. The only tract carried forward for leasing is in the Sand Creek Deposit: T156N, R102W, Section 14: NESW, NWNE.

Transfer to Other Federal Agencies (BR/FWS) (FS): The tracts located in Divide and Williams counties are associated with wetlands and may be of value for mitigation for the Garrison Diversion Project, or inclusion into the Fish and Wildlife Refuge System. BLM management of these tracts is not cost-effective. The Garrison Diversion Project will require mitigation acres, particularly wetland areas. BLM lands can serve this purpose. The Fish and Wildlife Mitigation Policy identifies the use of public lands as being a priority for mitigation purposes. Use of BLM lands would be a savings to the taxpayer, as there would be no acquisition costs. If these lands are not appropriate or needed for mitigation purposes, they should be transferred to the U.S. Fish and Wildlife Service.

Multiple-use values and benefits would be best realized by including these lands in the National Wildlife Refuge system. The U.S. Fish and Wildlife Service (FWS) has the capabilities to acquire wildlife management easements on adjoining lands, thus ensuring that the wetland ecosystems are preserved and enhanced by management. If the FWS does not wish to add these lands to their refuge management system, enhanced values and benefits to society can be realized if management by FWS is undertaken through cooperative management agreement. Custodial management would not serve to enhance the values of the wetland ecosystems.

The tract in McKenzie County lies within the Forest Service administrative boundary and adjoins Forest Service land. There are no other BLM lands in the vicinity. Management by the Forest Service would be more practical and cost-effective.

Recommendation B: Retain the following scattered tracts. This recommendation does not preclude the option of reclassifying these lands based on new information or policy changes by the Department of Interior or the BLM. BLM will consider disposing of these tracts under provisions of the Recreation and Public Purposes Act (R&PP) to qualified applicants, sale to state or local agencies, or exchange with state or local government.

McKenzie County

Township	Range	Section
152N	103W	Sec. 14: Lot 5
152N	103W	Sec. 13: Lots 6, 7
151N	104W	Sec. 26: Lots 1, 4

Rationale: These lands border on the Yellowstone and Missouri rivers. Access is provided by the rivers. For the most part the tracts consist of upland along the rivers, with little riparian area. There is presently limited recreation opportunity on these tracts. While management of these tracts is not cost-effective, there is the potential for future public use and public access development.

Preservation of wildlife habitat values and recreation potential are the primary reasons for retaining these lands. After close evaluation if it is determined that a lease or patent under R&PP will preserve or enhance public values, it may be beneficial to allow the proposed use.

Recommendation C: Retain the following public lands, pending further study and a determination of ownership status by cadastral survey. Consider disposing of these tracts under the Recreation and Public Purposes Act (R&PP), or through sale or exchange, to state or local units of government.

This recommendation does not preclude the option of reclassifying these lands based on new information or policy changes by the Department of Interior or the BLM (if tracts are determined to be still in public ownership).

Williams County

Township	Range	Section
152N	103W	Sec. 20: Lots 1, 3
152N	103W	Sec. 21: Lot 5
152N	104W	Sec. 14: Lots 1, 2, 3
152N	104W	Sec. 15: Lots 1, 2
152N	104W	Sec. 20: Lot 4
152N	104W	Sec. 21: Lot 4
152N	104W	Sec. 23: Lot 1
152N	104W	Sec. 24: Lots 2, 3

McKenzie County

Township	Range	Section
152N	104W	Sec. 21: Lot 7
152N	104W	Sec. 22: Lots 3, 4
152N	105W	Sec. 27: Lot 3

Rationale: These lands lie within the floodplain of the Missouri and Yellowstone rivers. Changes in the river channel may have removed these tracts from public ownership. The majority of the land in these areas is on the river floodplain, and there appears to be unsurveyed accreted land along the river.

Preservation of the habitat values and recreation potential are the primary reasons for retaining these lands. After close evaluation if it is determined that a lease or patent under the R&PP Act or sale or exchange to another governmental entity will preserve or enhance public values, it may be beneficial to allow such a transfer.

Recommendation D: Acquire lands adjacent to existing public lands bordering the Missouri and Yellowstone rivers. Acquisition could be accomplished by gift to the United States or by exchange of lands identified for disposal. Selection criteria noted in State Director Guidance will be used in evaluating all exchange proposals or other transactions.

Rationale: Lands adjacent to rivers or lakes have high public values. These types of lands provide good receational opportunities for the general public and provide excellent wildlife habitat. BLM lands along these rivers are small, and expanding these areas would greatly add to their management potential.

Disposing of public lands in McKenzie and Williams counties that are scattered and difficult to manage reduces the land base needed for public hunting and other forms of recreation. To offset this loss the BLM should acquire lands that have potential for cost-effective management. This can best be accomplished by acquiring lands adjacent to BLM tracts.

Objective: To provide for all applicable rights-of-way across public lands within an environmentally acceptable manner.

Rationale: Local and regional energy developments point to a probable need for additional pipelines, power lines, and roads in this area. Public lands should support these needs to the extent possible without loss of higher public values.

Recommendation E: Keep public lands within this planning area open to rights-of-way applications. Each application should be evaluated on its own merits. Take measures to protect the environmental values.

Rationale: Most future rights-of-way applications in this area would probably be energy related. As energy needs are of exceptionally high priority in our nation today, we must take positive action to develop and transport energy resources. In most cases mitigating measures can be taken to eliminate or limit significant adverse environmental impacts. Where this cannot be achieved, some flexibility to relocate proposed facilities should be allowed.

The planning area contains oil and gas resources and coal deposits of high to moderate potential; however, it is impossible to determine at this time which specific public lands might be needed for roads or rights-of-way in support of coal or oil and gas development in the future.

Recommendation F: Eliminate unauthorized use on public lands. Determine the ultimate tenure of land where permanent unauthorized uses/activities have occurred (e.g., agricultural activities, powerlines, or occupancy) using the following alternatives:

1. Authorization under permit or lease;
2. Transfer to private ownership through exchange or sale;
3. Termination of the use and restoration of the land.

Rationale: Unauthorized use of public lands denies the public lawful revenues and can damage public land resources or be detrimental to authorized users. Elimination of all unauthorized use of public lands is a goal set forth in State Director Guidance and BLM Policy.

COAL

The overall objectives of the BLM coal program are to: make federal coal resources available to meet present and future market demand; assure that mineral exploration, development, and extraction are carried out in such a way as to minimize environmental damage; receive fair market value for minerals subject to lease; and to provide for orderly and timely development of the resource.

The "Mining and Minerals Policy Act of 1970" declares it to be the policy of the federal government to encourage the development of the domestic minerals industry. (See the split-estate coal section for a complete discussion of objectives and rationale for the BLM coal program.)

Recommendation: All minerals underlying tracts categorized for disposal will be retained by the federal government. Federal coal reserves in T156N, R102W, Section 14: NESW, NWSE, will be carried forward for further consideration for leasing. Application of the coal screens in the Sand Creek, Williston, Tobacco Garden, and Bennie Peer deposits has removed federal coal reserves in all but one of the isolated tracts (*) from being carried forward for further consideration for leasing.

Williams County

Township	Range	Section
154N	97W	Sec. 17: SW¼NE¼
155N	97W	Sec. 21: SE¼SE¼
153N	99W	Sec. 28: NW¼NE¼, NW¼NW¼
154N	100W	Sec. 33: SE¼SE¼
156N(*)	102W	Sec. 14: NE¼SW¼, NW¼SE¼

McKenzie County

Township	Range	Section
152N	98W	Sec. 5: Lots 10, 11, 12
153N	98W	Sec. 24: SW¼SE¼
153N	98W	Sec. 25: W½NE¼
149N	102W	Sec. 17: NE¼SE¼

Rationale: Of the tracts within coal deposits identified for disposal, all but one (80 acres) have been excluded from further consideration for leasing.

Recommendation: Defer leasing the federal coal resources of the following tracts. Make these tracts available for development in the future when the local oil fields are exhausted. These tracts have been categorized for disposal through sale. Federal coal resources in these tracts will not be carried forward for further consideration for leasing at this time.

McKenzie County

Township	Range	Section
149N	95W	Sec. 1: Lot 1
149N	95W	Sec. 10: SE¼SE¼
150N	95W	Sec. 24: Lot 4
150N	95W	Sec. 25: Lot 1

Williams County

Township	Range	Section
154N	95W	Sec. 7: Lots 2, 3, 4
154N	95W	Sec. 10: N½SE¼
154N	96W	Sec. 12: SE¼NE¼, NE¼SE¼

Rationale: These tracts are located along the crest of the Nesson Anticline, which is one of the two largest structures in the Williston Basin. Oil has been produced from fields on the anticline since 1953. Production has continued on a large scale to the present day. Development of these tracts would jeopardize a major portion of the State's oil production. It is BLM policy to give priority to oil development over coal. Disposal will not likely interfere with the development of the federal coal resource.

Recommendation: Leave all the isolated tracts in this planning area open for potential coal exploration. However, applications will be assessed and evaluated on a case-by-case basis. These specific evaluations will determine whether or not to allow exploration to occur and what mitigations should be made as a condition for issuing the coal exploration license.

Rationale: All of the area has not been adequately explored to determine the exact nature and quality of the coal resources in the planning area. This information is a vital part of overall energy planning in the area, and only through exploration programs can we obtain that information. The exploration can occur without causing significant adverse impacts to the environment.

Recommendation: Issue licenses to mine coal to qualified applicants (under guidelines in 43 CFR 3400) within those areas designated acceptable for further consideration for leasing; however, each application must be assessed on its individual merits.

Rationale: As other energy supplies become more scarce, the demand for coal through licenses could increase. Licenses are specifically authorized in Section 8 of the Mineral Leasing Act of 1920. They are to provide for the strictly local domestic need for coal. Under the provisions of the regulations individuals or associations of individuals are allowed to mine federal coal for their own use. A license to mine may be issued

to a municipality solely for the nonprofit mining and disposal of coal to its own residents. The Bureau may also authorize a recognized and established relief agency of any state to take federally owned coal within the state and provide it to families on its rolls who require the coal for household use but are unable to pay for the coal. These licenses do not require the payment of rentals or royalities. Any mining activities authorized by a license are subject to the Surface Mining Control and Reclamation Act.

OIL AND GAS

Objective: Make all BLM-administered oil and gas reserves on these tracts available for exploration and development. Assure that exploration and development activities are carried out in such a way as to minimize environmental damage.

Rationale: The "Mining and Minerals Policy Act of 1970" declares it to be the policy of the federal government to encourage the development of the domestic minerals industry. (See rationale for split-estate coal objective.)

Recommendation: Make available for exploration and leasing all of the lands in the planning area on which the oil and gas is federally owned. Stipulations will be developed for leases and development plans on a case-by-case basis.

Rationale: With the critical need for energy resources, as many areas as possible must be made available, but surface resource values must be protected. Impacts resulting from oil and gas development normally can be mitigated. Lease and development plan stipulations will assure these mitigations.

MISCELLANEOUS MINERALS

Objective: Develop a geology, energy and minerals (GEM) inventory program, so that the extent, quality, and accessibility can be determined of the limited amounts of minerals that the BLM controls other than oil and gas. Where potentially economic amounts of these minerals occur, make them available for development. Mineral resources in this category include but are not limited to: uranium, geothermal energy, salt, potash, sodium sulfate, sand and gravel, scoria, stone, and clay.

Rationale: The minerals and mineral materials mentioned above are known to exist or possibly exist in the planning area on isolated tracts. Some of these minerals are important at the present time, and others will become increasingly important in the future. Improved processing and mining methods will allow the development of increasingly lower grade deposits. Industrial development will also increase the demand for mineral materials, which may be partially supplied from federally controlled sources.

Recommendation: Prepare a basic data file for minerals other than coal and oil and gas within the scattered tracts in this planning area. This file is to be started this fiscal year and updated as needed.

Rationale: Little is known about these resources and little interest is being shown at this time, but interest could grow in the future. This file would supply the basic minerals data needed for a number of possible future actions. These include land sales or exchanges, mineral leases, and material sales.

Recommendation: Federally controlled minerals other than coal and oil and gas must be made available for exploration and development upon request. Applications will be handled on a case-by-case basis with appropriate analysis to protect other resource values.

Rationale: Minerals are necessary for the continued growth, development, and maintenance of the Nation. Their availability must be assured where necessary, but not at the loss of more valuable resources.

RANGE

Objective: All tracts suitable or desirable for grazing should be made available for grazing and managed at the custodial level. Lands identified for disposal in the near future (FY84-FY85) should not be considered for lease. Nonleased lands identified for retention should be offered for lease, or for a short-term nonrenewable lease where circumstances warrant, and managed at the custodial level. Other lands already leased should continue to be made available for grazing, unless other circumstances dictate changes, and managed at a custodial level.

Rationale: Many of the isolated parcels have been inventoried but are without a lease. Unauthorized grazing exists on many sites. These areas should be leased.

Size, problems relating to physical access, and low percentage of federal range limits the efficient management of the range resource on the scattered tracts. Negative cost constraints associated with these factors make custodial management the most cost-effective and logical option.

Current BLM grazing policy requires that management priorities be assigned among allotments or groups of allotments within a planning area. It provides for placing similar allotments into one of three categories: (1) maintain their current satisfactory conditions; (2)

improve their current unsatisfactory conditions; (3) or manage the allotments custodially, while protecting current resource values.

Recommendation: Those tracts categorized for disposal which are still retained by BLM two years after the final release of the MFP will be offered for short-term nonrenewable lease and managed at the custodial level.

Rationale: Unauthorized grazing use, small size, low percentage of federal range, and access problems limit the efficient management of the range resource on the scattered tracts. Tract inventories rate these areas in fair to good condition. Short-term leases will ensure that the public will be compensated for use of the land by livestock, pending final disposition of these tracts.

Recommendation: Continue to lease the following tracts for grazing and manage at the custodial level. This recommendation does not preclude the option of modifying or cancelling the existing leases consistent with the disposal categorization noted and as provided for under 43 CFR 4120.2-1(d) and 4130.2(d)(3). Leases subject to these provisions will be renewed on a short-term basis pending disposal.

Williams County

Township	Range	Section
154N	95W	Sec. 10: N½SE
156N	102W	Sec. 14: NESW, NWSE
153N	103W	Sec. 9: NWNE
159N	100W	Sec. 22: SENE, SENW, NESW, S½SW, N½SE, SWSE

McKenzie County

Township	Range	Section
151N	99W	Sec. 35: NENE
152N	100W	Sec. 24: SESE
152N	100W	Sec. 25: W½NW
151N	104W	Sec. 26: Lot 4

Rationale: Because the allotments are small in size and widely scattered, custodial management is the most logical. Range conditions on most of the allotments are satisfactory, indicating little need for improvement. Continued leasing of these tracts does not conflict with other surface resource values present.

Recommendation: Following cadastral determination, the riparian tracts in the planning area will be studied further to acquire baseline resource data and determine range condition trend.

Rationale: The effects of wildlife-livestock interactions need to be determined. Basic inventory data is not available for these areas. The importance of riparian habitat to wildlife is widely recognized. The potential conflicts which may be present on these areas need to be identified.

WATERSHED

Upland Watersheds

Objective: Avoid surface actions which negatively impact existing vegetative cover.

Rationale: Upland watershed areas fall into three hydrologic categories: prairie uplands, badlands, and wetlands. BLM policy and the State 208 program directs the Bureau to protect soil and water resources by ensuring an adequate amount of vegetative cover in each of these hydrologic areas.

Badland areas are fragile and of low productivity. Accelerated soil erosion once underway cannot be readily reversed. Therefore, surface actions which negatively impact existing vegetative cover must be restricted.

Degradation of baseline vegetative cover in wetland watershed areas will accelerate soil erosion and increase sedimentation and nutrient influx. Surface actions which negatively impact existing vegetation must be mitigated to halt "accelerated aging" occurring on many areas and to comply with Executive Order 11990.

Recommendation: Within the limits of custodial management, maintain or improve present vegetative cover to minimize soil erosion from tracts to be offered for short-term lease. Grazing lessees should be encouraged to follow best management practices developed by local soil conservation districts.

Rationale: Watershed degradation accelerates soil erosion, which causes a loss in soil productivity and contributes to poor water quality in the areas, thus violating Bureau policy and Public Law 92-500, Section 208.

Riverine Floodplains

Objective: Avoid surface actions which impact the river floodplains during the peak runoff period of March through June.

Rationale: Accelerated soil erosion degrades the watershed. The loss of soil productivity and increased nutrient loading contributes to poor water quality. To comply with existing Bureau policy and Public Law 92-500, Section 208, surface actions which negatively

impact existing vegetative cover must be restricted during the peak runoff period. This will protect the floodplain and comply with Executive Order 11988.

Recommendation: Within the limits of custodial management, maintain or improve present vegetative cover in riparian areas which will be offered for grazing lease. Grazing lessees should be encouraged to follow best management practices developed by local soil conservation Districts. Do not allow any use in the watershed that would cause nonmitigable disturbances. Surface disturbing activities should be kept to a minimum level. Ensure mitigating measures are applied to all surface disturbing activities, and assess these activities on a case-by-case basis.

Rationale: Watershed degradation accelerates soil erosion, which causes a loss in soil productivity and contributes to poor water quality in the area, thus violating Bureau policy and Public Law 92-500, Section 208.

WILDLIFE RESOURCES

General

Objective: Manage for wildlife habitat on scattered tracts (that are retained in BLM ownership) which have good potential for wildlife enhancement. Develop cost-effective management for BLM retention lands at levels reflecting resource values, priorities, and manageability.

Rationale: Parcels addressed by this objective are not considered crucial to the well-being of the wildlife resources but are of sufficient value to warrant custodial management by BLM and more intensive management by the North Dakota Game and Fish Department (NDGF) under cooperative management agreements for lands retained in BLM ownership. Several of the scattered tracts of BLM land have wildlife values that would respond favorably to more intensive management, which would enhance the wildlife populations, productivity, and diversity for relatively large areas. Since proper livestock grazing management systems are often impractical on small tracts, priority should be given to wildlife habitat enhancement on these areas.

Recommendation: NDGF will be given the option to nominate tracts from the disposal and retention categories for cooperative management. Such tracts should be identified by NDGF as being essential or critical to wildlife programs which are ongoing or being planned for the purpose of establishing water and habitat improvement and enhancement projects. Nominations should be made during the public comment period. Preliminary plans outlining cooperative management objectives and proposed projects must be received by the Dickinson District Office by September 1, 1983. Nominations drawn from the disposal category and not fully supported will be offered for sale to the general public.

Rationale: This recommendation provides for the effective management of resource values present on BLM scattered tracts that will provide for long-term benefits to the public and help maintain wildlife and other resources for future generations. This would be accomplished by offsetting habitat loss and ensuring that the ecological islands are maintained and enhanced through intensive managment where possible to ensure diversity and stability in the total ecosystem.

Recommendation: Manage riparian areas and associated uplands at levels that will ensure that their present condition of good or better is maintained.

Rationale: Riparian areas and the associated upland areas are critical sources of biological diversity. The majority of wildlife either depend on wetland-riparian areas or use them proportionally more than any other habitat type. Although the parcels administered by BLM are small, and the amount of riparian habitat is considerably less than upland habitat, their importance to the ecosystem and the public warrants their retention. Present condition of the riparian areas is acceptable (good or better) and present custodial management is adequate to preserve the riparian areas addressed by this recommendation.

Wetlands

Objective: Provide for the management of wetlands that will best benefit wildlife and society.

Rationale: Significant amounts of wetland habitat have been destroyed or reduced in quality by various human activites. Executive Order 11990, Protection of Wetlands, gives direction to manage wetland ecosystems to preserve and enhance their values. The National Environmental Policy Act gives additional direction to manage resources so that the Nation may attain the widest range of beneficial uses of the environment without degradation.

Recommendation: Three options are considered under this recommendation. If none of the three options are implemented for a particular tract, that tract will be managed by the BLM at the custodial level.

Option #1: Transfer the wetlands tracts to the Bureau of Reclamation or the U.S. Fish and Wildlife Service to be used as mitigation areas for the Garrison Diversion Project.

Option #2: Transfer the lands to the U.S. Fish and Wildlife Service (FWS) for management within the refuge system.

Option #3: Retain the lands under BLM administration but transfer management responsibilities to the FWS through a cooperative management agreement.

Rationales

Option #1: The Garrison Diversion Project will require mitigation acres, particularly wetland areas, and BLM lands can serve this purpose. The Fish and Wildlife Mitigation Policy identifies the use of public lands as being a priority for mitigation purposes. The use of BLM lands would also result in savings to the taxpayer, as there would be no acquisition costs.

Option #2: Multiple-use values and benefits would be best realized by including these lands in the refuge system. The FWS has the authority to acquire wildlife management easements on adjoining lands, thus ensuring that the wetland ecosystems are preserved and enhanced by management.

Option #3: These lands are not actively managed by BLM, but enhanced values and benefits to society can be realized if management by the FWS is undertaken through a cooperative management agreement. Custodial management does not serve to enhance the values of the wetland ecosystems, nor does it result in the greatest benefits for society.

RECREATION

Objective: Enhance the recreation potential of the public lands in the MFP area within the constraints of their size, scattered ownership pattern, and manageability by BLM.

Rationale: It is highly unlikely that the BLM will ever be in a position to manage an active recreation program; however, some tracts of public land do possess significant recreational values. These should be managed under cooperative agreement or under the authority of the Recreation and Public Purposes Act (R&PP) by another agency in a position to actively manage them for their recreation potential.

Recommendation: Tracts along the major river/reservoir systems will be retained in public ownership.

Rationale: The isolated nature of these federal tracts precludes any active recreation program by BLM in the MFP area; however, tracts adjacent to Lake Sakakawea and its major tributaries have high recreational value. Their proximity to these major recreational sites, scenic values, proximity to the Lewis and Clark National Trail, and habitat values combine to make these areas important recreational sites which could be more effectively managed by State agencies through sale, exchange under cooperative management agreements, or under the authority of the R&PP Act, consistent with options identified in lands recommendations.

Recommendation: Acquire lands adjacent to existing public lands bordering the Missouri and Yellowstone rivers. Acquisition could be accomplished by gift to the United States or by exchange of lands identified for disposal.

Rationale: The scattered tracts adjacent to rivers or lakes have high public values. They offer good receational opportunities for the general public, and some provide access to the Lewis and Clark National Trail. BLM lands along these rivers are limited in size, and expanding these areas would greatly add to their management potential.

Proposals for cooperative recreation management by the North Dakota Parks and Recreation Department will be considered, as will valid applications under the Recreation and Public Purposes Act for management of these lands for public use.

PALEONTOLOGY

Objective: Protect paleontological resource values by reducing deterioration and inadvertant loss of paleontological sites and areas.

Rationale: Paleontological resources are a part of the national heritage, and BLM must manage the wisest use of this resource. The primary purpose of BLM management of paleontological values is protection. Paleontological remains are useful for reconstructing environments of the past and for correlating geological formations. This type of resource is relatively rare.

The 1906 Antiquities Act does not specifically list fossils, but rather "objects of historic or scientific interest." Because of this provision, scientific research has been conducted under an Antiquity Permit. Recently this interpretation has been questioned; but even if it is dropped, research in paleontology will probably continue under some type of permit system. The permit system provides a measure of quality control and supervision over the extraction of fossils from public lands.

Potential consumers of the resource are scientific and research institutions, educational organizations, and recreational collectors.

Recommendation: A number of paleontological sites are known or suspected to exist on the scattered tracts in this planning area. Before allowing surface disturbing activities on lands with known sites, the significance of the sites will be assessed by BLM personnel. Additionally, if any paleontological sites are discovered during surface disturbing activities, operations will

be required to cease and a report will have to be filed with the BLM. The significance of the sites will be assessed. In all cases, suitable mitigation measures will be prescribed for significant sites.

Rationale: Surface disturbance could have a detrimental impact by destroying a rare resource of scientific importance. Proper mitigating measures could lower that impact to acceptable levels.

Recommendation: Maintain an inventory of paleontological sites and areas, which can be used to identify locations that need special protection.

Rationale: BLM is required to protect paleontological values. At present there is very little specific knowledge of this resource in the planning area and, in all probability, important sites are deteriorating or being destroyed because of this lack of knowledge. The management objective of reducing deterioration and protecting the resource from loss cannot be met without an inventory.

SUMMARY

A total of 3,280.12 acres of public land is included in the McKenzie-Williams MFP. There are 214.92 acres of these lands that are in the lakebed of Lake Sakakawea and are administered by the United States Army Corps of Engineers through rights-of-way and are not specifically addressed in the MFP. The remaining 3,025.2 acres are classified in three categories: retain, disposal (sale, transfer, exchange), and further study according to criteria in the State Director's Guidance (see Table X).

The option is retained on all tracts to reclassify them or change management based on new data or policy changes.

All mineral rights will be retained in federal ownership on tracts that are disposed of. Exploration and leasing for oil and/or gas on all tracts will continue to be allowed. All other minerals will be made available for private industry, local governments, and private individuals on a case-by-case basis.

All public lands will remain open to rights-of-way applications. Unauthorized use will be eliminated through the mechanism identified in the State Director Guidance.

Wetlands and riparian areas will be retained by the BLM. Lands that are adjacent to existing public lands bordering the Missouri and Yellowstone rivers will be acquired through gift to the United States or by exchange.

Grazing will continue to be allowed on tracts already under lease and managed at the custodial level. Where tracts under lease have been identified for disposal, the grazing lease may be modified or cancelled, as provided for under 43 CFR 4120.2-1(d) and 4130.2(d)(3). Tracts that are currently unleased for grazing and are categorized for disposal will be offered for short-term nonrenewable grazing leases and managed at the custodial level if they are still under BLM administration two years after the final release of the MFP. All lands retained will be offered for grazing where applicable.

TABLE X
SCATTERED TRACT CATEGORIZATION SUMMARY

	Acreage
Total Acres of Public Land	3,280.12
Corps of Engineers Right-of-Way	254.92
Acres Addressed in Land Use Plan	3,025.20
Lands Categorized for Retention	100.45
Lands Categorized for Retention, Pending Further Study	296.24
Lands Categorized for Disposal	2,628.51
Acreage identified for transfer to Bureau of Reclamation/U.S. Fish and Wildlife Service	600.00
Acreage identified for transfer to U.S. Forest Service	40.00
Acreage identified for Sale/Exchange	1,988.51 [1]
Total	3,025.20

[1]Approximately 51 percent of the acreage identified for sale/exchange is located in high-moderate coal areas.

APPENDICES

APPENDIX A
THE SPLIT ESTATE

In North Dakota there are over 4.2 million acres of federally owned minerals beneath nonfederal surface. This figure includes reservations involving coal, oil and gas, and other minerals, such as potash, uranium, and phosphate. Some of these reservations are for only one mineral, some are for certain combinations, and some are for all minerals.

The following is a brief account of the actions occurring early in the century that resulted in the separation of the mineral estate from the surface estate in large portions of the United States. Later actions that resulted in federal acquisition of minerals (approximately 300,000 acres in North Dakota-mostly a percentage ownership) are not discussed, but these acquisitions are included in the 4.2 million acre total.

As early as 1901, Congress was concemed with the problem of agricultural claims on lands believed to contain minerals. By 1905 Congress had become aware of widespread fraud involving these claims.

In 1906 two bills were introduced in Congress authorizing the president to reserve all coal and lignite found on the public lands for future disposal; however, neither of these bills was reported out of committee. Those supporting these bills were worried about the coal lands falling under the control of the monopolies. They were also concerned with the rate at which the Nation's fuels were being consumed.

President Theodore Roosevelt also voiced these concerns. In a message to the 59th Congress he pointed out that the amount of coal used in the most recent ten years was equal to that used during the preceding 50 years. "If we dispose of all the coal lands now we can be well assured that 25 years hence the generation then coming into manhood will regret our shortsightedness and lack of provision for the future," he wamed.

Because Congress had not acted on the coal legislation, Roosevelt instructed the Secretary of Interior to withdraw the remaining public coal lands from homestead entry. Between July 26, 1906, and December 13, 1907, 66,938,800 acres of coal land were withdrawn by executive order, and on August 15, 1907, the first oil lands were withdrawn.

The withdrawal prevented those settlers who had selected coal and oil lands (prior to the withdrawal) from obtaining patents. In 1909, a law was enacted that allowed these settlers to obtain a patent to the lands with a reservation of the coal deposits to the United States. This was the first legislation establishing the separation policy.

The following Congressional actions followed the same concept and expanded the separation policy to cover more lands.

1910 Law enacted that allowed new agricultural entries on coal lands (with coal reserved to the United States).

1914 Law enacted that allowed agricultural entries on lands containing phosphate, nitrate, potash, oil, gas, and asphaltic minerals, with these minerals reserved to the United States.

1916 Stockraising Homestead Act passed. It required that all minerals be reserved to the United State, when federal lands pass into private ownership.

Most of the federal mineral reservations in North Dakota are in the western half of the State. There are two basic reasons for this: first, most of the land in the eastem half had already been settled—with patents grants—prior to the establishment of the separation policy, and much of the westem half was settled after the policy was in effect; secondly, all of the significant coal resources are located in the westem half of the State.

These federal reservations are checkerboarded among minerals owned by the State of North Dakota, railroads, and banks, as well as private individuals. North Dakota is not unique in this; for example, Montana and Wyoming contain even larger acreages of federally reserved minerals than North Dakota.

Note: Most of the above information was gathered from a paper entitled "The Separation of Surface Mineral Estates in Public Land Disposition," which was written in 1964 by Tadd Linsenmayer, who was then a research assistant in the Office of Chief of Legislation and Cooperative Relations, Bureau of Land Management.

APPENDIX B
SPLIT-ESTATE FEDERAL MINERALS — COAL
ISSUES AND PLANNING CRITERIA

Development of federal coal resources can cause signficant impacts to other resource values, such as wildlife, water, cultural resources, and scenery. Use of the land for roads, dwellings, cemeteries, parks, etc., can also be disrupted. Since almost all of the federal coal in the planning area underlies private surface, its development would affect surface owners.	Coal areas will be designated as being acceptable for further consideration for leasing. Areas to be excluded from leasing will be identified.	1. Coal potential—Identify those portions of the planning area which are underlain by coal with a moderate or high potential for development by surface mining. 2. Unsuitability Criteria (see Appendix D) 3. Other Resource Trade-Offs 4. Surface Owner Consultation The following are considered: a. Number opposed to leasing; b. Acreage incuded under "opposed;" c. Percent of federal coal in tract area; d. Distribution pattern of federal coal; e. Distribution pattern of opposed comments; f. Location and number of existing federal leases; g. Location and number of private and state coal leases; h. Location and number of surface lease agreements on lands over federal coal. 5. Other Land Use Plans (Consistency)
Subissues		
1. Agriculture a. Concern with the displacement of agricultural production resulting from the development of federal coal. b. Concern with the trade-off between agricultural and coal values. c. Concern with the effects of coal development on individual farm-ranch operations.	Potential impacts on agriculture are recognized as a public concern in the planning area. This concern will be addressed during activity planning, after delineation of proposed leasing tracts.	In the unit resource analyses* prepared for the McKenzie-Williams MFP an impact assessment focusing on agricultural and coal values is discussed generically, using currently published information. Detailed and site-specific agricultural impacts will be studied during activity planning, after potential leasing tracts have been identified.
2. Air Quality There is concern that mine-mouth coal conversion facilities will degrade air quality in the local or regional area.	Potential impacts on air quality are recognized as public concerns in the planning areas. The federal coal program provides for consideration of air quality concerns during activity planning, after delineation of proposed leasing tracts.	No planning criteria were developed for air quality because it is not considered in the MFP decision.

3. Oil and Gas Conflict	Identify oil and gas areas where coal leasing will be deferred.	Areas of significant oil and gas production should not be leased for coal mining until the petroleum is exhausted, unless it can be shown that conflicts between the two types of development can be mitigated. Areas of significant conflicts were determined after consultation with the Conservation Division of the U.S. Geological Survey, now a part of the BLM.
4. Reclamation of Agricultural Lands Concerns associated with the question of whether or not cropland and rangeland can be reclaimed to pre-mining productivity.	Reclamation is recognized as a public concern in the planning area. This subissue will be addressed during activity planning, after delineation of proposed leasing tracts.	County general soil surveys of North Dakota are the basis for a generalized evaluation of reclamation potential. Reclamation will be considered further during activity planning, but no final judgement on reclaimability is rendered until mine plans have been evaluated.
5. Water Concern for the protection of water supplies.	Areas will be identified as follows: (1) exclude from leasing or mining; (2) study further; or (3) acceptable for further consideration for leasing.	Areas where data shows that an acceptable replacement water supply is not available will be excluded from leasing.
6. Social and Economic Concerns Coal development results in population increases that affect public finance capabilities, public service adequacy, lifestyles, and social structures.	This subissue is recognized as a public concern in the planning areas and will be addressed during activity planning, after delineation of proposed leasing tracts.	Social and economic impacts resulting from potential coal development are discussed generically in the Planning Area Analysis, using available published data and the comments received through public participation activities.
7. Woodland, Wetland, and Native Prairie These types of land provide unique and essential habitat for many wildlife species. There is concern over the potential loss of this habitat due to coal development.	The following options are available: (1) unsuitable for leasing or mining; (2) acceptable for further consideration for leasing pending further study; (3) acceptable only if appropriate mitigating measures are applied; (4) acceptable for further consideration for leasing.	To apply unsuitability criteria 9-15, essential wildlife habitat was identified through interpretation of color infrared aerial photos.
Oil and gas exploration, development and production conflicts with other land uses and causes impacts to other resources.	Lease applications received on federal oil and gas parcels will be categorized into one of the following: a. Do not lease; b. Lease with standard stipulations; c. Lease with standard and special stipulations. These categorizations will be reviewed annually.	In processing the lease application the following are considered: a. District Oil and Gas Programmatic Environmental Assessment; b. District overlay files; c. Interagency agreements; d. Correspondence between the Montana State Office and the Dickinson District Office. During land use planning, information in the assessment and overlay files was updated.

Rangeland management status needs to be determined and categorized. Impacts of livestock grazing on the rangeland resources need to be assessed.	Categorize all grazing allotments into one of the following management cateogories: (1) improve, (2) maintain present status, (3) provide custodial management.	Criteria checklist developed by the District. Elements of the BLM Grazing Management Policy, and Rangeland Improvement Policy were used to evaluate all grazing allotments.
	Management alternatives will be developed for BLM surface. These alternatives will be addressed in the proposed District environmental assessment for grazing.	Management alternatives listed in State Director Guidance* were addressed. Additional aternatives developed through the BLM planning system were also considered.
Unleased (grazing) lands need to be brought under grazing management or excluded from unauthorized grazing.	Initiate grazing leases on all lands determined to be suitable for grazing. Exclude or restrict grazing where it is unsuitable or undesired on land identified for retention under land base adjustment.	Identify current use. Identify management potential for grazing or other resources. Determine grazing capability and potential. Define other resource priorities that restrict or exclude grazing.
Land base adjustments are needed in order to improve management efficiencies of Bureau resource programs.	All public lands will be delineated into three general categories: (1) disposl (sale, transfer, or exchange); (2) retention; or (3) further study.	Lands identified for potential removal from the federal estate through sale, exchange, or transfer were evaluated according to land pattern review criteria listed in State Director Guidance.*

*Distributed to the public upon request.

APPENDIX C
COAL POTENTIAL

HIGH COAL DEVELOPMENT

Potential

For inclusion into a high development potential tract an area must meet all of the following criteria:

1. The area must be underlain by one or more beds of coal with individual thicknessess of 5 ft. (1.5m) or more.

2. The area must be underlain by a sufficient quantity of 5 ft. (1.5m) or thicker coal beds to achieve a 9.2 or better mining ratio (10 to 1 stripping ratio).

3. There can be no more than 150 ft. (45.7m) of rock removed to recover the coal bed(s) under consideration.

MODERATE COAL DEVELOPMENT

Potential

For inclusion into a moderate potential tract an area must meet all of the following criteria:

1. The area must be underlain by one or more beds of coal with individual thicknesses of 5 ft. (1.5m) or more.

2. The area must be underlain by a sufficient quantity of 5 ft. or thicker coal beds to have a mining ration of 18.4 or less (20 to 1 or less stripping ratio).

3. There can be no more than 200 ft. (61.0m) of rock removed to recover the coal bed(s) under consideration.

4. The area must not be able to meet all three high development potential criteria.

LOW COAL DEVELOPMENT

Potential

For inclusion into a low potential tract an area must lie within the study area boundaries and fail to meet the high or moderate coal development potential criteria.

APPENDIX D: COAL UNSUITABILITY CRITERIA

Criteria for assessing lands unsuitable for all or certain stipulated methods of coal mining.

Criterion Number 1. All Federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, National Forests and Federal lands in incorporated cities, towns and villages.

Exceptions. (i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground coal mine, or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th meridian, that surface mining may be in compliance with the Multiple-Use Sustained-Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1976 and the Surface Mining Control and Reclamation Act of 1977. (ii) A lease may be issued within the Custer National Forest with the consent of the Department of Agriculture as long as no surface coal mining operations are permitted.

Exemptions. The application of this criterion to lands within the listed land systems and categories is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977. The application of the portion of this criterion applying to land proposed for inclusion in the listed systems does not apply to lands: to which substantial legal and financial commitments were made prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 2. Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes. Federally owned surface shall be considered unsuitable.

Exceptions. A lease may be issued, and mining operations approved in such areas if the surface management agency determines that:

(i) All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or
(ii) The right-of-way or easement was granted for mining purposes; or
(iii) The right-of-way or easement was issued for a purpose for which it is not being used; or
(iv) The parties involved in the right-of-way or easement agree, in writing, to leasing; or
(v) It is impractical to exclude such areas due to the location of coal and method of mining and such areas or uses can be protected through appropriate stipulations.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and finsncial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 3. Federal lands affected by section 522(e)(4) and (5) of the Surface Mining Control and Reclamation Act of 1977 shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community or institutional building or public park or within 300 feet of an occupied dwelling.

Exceptions. A lease may be issued for lands:

(i) Used as mine access roads or haulage roads that join the right-of-way for a public road;
(ii) For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated;
(iii) If, after public notice and opportunity for public hearing in the locality, a written finding is made by the authorized officer that the interests of the public and the landowners affected by mining with 100 feet of a public road will be protected;

Exemptions. The application of this criterion is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

Criterion Number 4. Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any Federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable, unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the Federal Land Policy and Management Act of 1976.

Exemption. The application of this criterion to lands for which the Bureau of Land Management is the surface management agency and lands in designated wilderness areas in National Forests is subject to valid existing rights.

Criterion Number 5. Scenic Federal lands designated by visual resource management analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable. A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 6. Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 7. All districts, sites, buildings, structures and objects of historic, architectural, archeological or cultural significance on Federal lands which are included in or eligible for inclusion in the National Register of Historic Places, and an appropriate buffer zone around the outside boundary of the designated property (to protect the inherent values of the property that make it eligible for listing in the National Register) as determined by the surface management agency, in consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Office shall be considered unsuitable.

Exceptions. All or certain stipulated methods of coal mining may be allowed if the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and State Historic Preservation Office that the direct and indirect effects of mining, as stipulated, on a property in or eligible for the National Register of Historic Places will not result in significant adverse impacts to the property.

Exemptions. The application of this criterion to a property listed in the National Register is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977. The application of the criterion to buffer zones and properties eligible for the National Register does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 8. Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

Exceptions. A lease may be issued and mining operation approved in an area or site if the surface management agency determines that:

(i) With the concurrence of the state, the area or site is of regional or local significance only;
(ii) The use of appropriate stipulated mining technology will result in no significant adverse impact to the area or site; or
(iii) The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g., paleontological sites).

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which includes operations on which a permit has been issued.

Criterion Number 9. Federally designated critical habitat for threatened or endangered plant and animal species, and habitat for Federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

Exception. A lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 10. Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

Exception. A lease may be issued and mining operations approved it, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 11. A bald or golden eagle nest or site on Federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exceptions. A lease may be issued if:

(i) It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or
(ii) The surface management agency, with the concurrence of the Fish and Wildlife Service, determines that the golden eagle nest(s) will be moved.
(iii) Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 12. Bald and golden eagle roost and concentration areas on Federal lands used during migration and wintering shall be considered unsuitable.

Exception. A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 13. Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of Federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exception. A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the falcon habitat during the periods when such habitat is used by the falcons.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 14. Federal lands which are high priority habitat for migratory bird species of high Federal interest on a regional or national basis, as determined jointly by the surface management agency and the Fish and Wildlife Service, shall be considered unsuitable.

Exception. A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

Exemption. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 15. Federal lands which the surface management agency and the state jointly agree are fish and wildlife habitat for resident species of high interest to the state and which are essential for maintaining these priority wildlife species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include:

(i) Active dancing and strutting grounds for sage grouse, sharp-tailed grouse and prairie chicken;
(ii) Winter ranges most critical for deer, antelope and elk; and
(iii) Migration corridors for elk.

A lease may be isued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 16. Federal lands in riverine, coastal and special floodplains (100-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of coal mining.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 17. Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

Exception. A lease may be issued where the surface management agency in consultation with the municipality (incorporated entity) or the responsible governmental unit determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 18. Federal lands with National Resource Waters, as identified by states in their water quality management plans, and a buffer zone of Federal lands 1/4 mile from the outer edge of the far banks of the water, shall be unsuitable.

Exception. The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the National Resource Waters.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 19. Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley vloors according to the definition in § 3400.0-5(a) of this title, the standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published and approved state programs under the Surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue or preclude farming, shall be considered unsuitable. Additionally, when mining Federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

Exemptions. This criterion does not apply to surface coal mining operations which produced coal in commercial quantities in the year preceding August 3, 1977, or which had obtained a permit to conduct surface coal mining operations.

Criterian Number 20. Federal lands in a state to which is applicable a criterion (i) proposed by that state, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

Exceptions. A lease may be issued when:

(i) Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis plan, or supplement to a comprehensive land use plan, for the area in which such land is included; or
(ii) After consultation with the state, the surface management agency determines that all or certain atipulated methods of coal mining will not adversely affect the value which the criterion would protect.

Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which aurface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Underground mining exemption from criteria.

(a) Federal lands with coal deposits that would be mined by underground mining methods ahall not be assessed as unsuitable where there would be no surface coal mining operations, as defined in § 3400.0-5 of this title, on any lease, if issued.
(b) Where underground mining will include surface operations and surface impacts on Federal lands to which a criterion applies, the lands shall he assessed as unsuitable unless the surface management agency finds that a relevant exception or exemption applies.

Source: 43 CFR 3461.1

APPENDIX E

Public Law 95-87
95th Congress

An Act

To provide for the cooperation between the Secretary of the Interior and the States with respect to the regulation of surface coal mining operations, and the acquisition and reclamation of abandoned mines, and for other purposes.

Aug. 3, 1977
[H.R. 2]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Surface Mining Control and Reclamation Act of 1977".

Surface Mining Control and Reclamation Act of 1977.
30 USC 1201 note.

SURFACE OWNER PROTECTION

30 USC 1304.

SEC. 714. (a) The provisions of this section shall apply where coal owned by the United States under land the surface rights to which are owned by a surface owner as defined in this section is to be mined by methods other than underground mining techniques.

(b) Any coal deposits subject to this section shall be offered for lease pursuant to section 2(a) of the Mineral Lands Leasing Act of 1920, as amended.

30 USC 201.

Consent.

(c) The Secretary shall not enter into any lease of Federal coal deposits until the surface owner has given written consent to enter and commence surface mining operations and the Secretary has obtained evidence of such consent. Valid written consent given by any surface owner prior to the enactment of this Act shall be deemed sufficient for the purposes of complying with this section.

(d) In order to minimize disturbance to surface owners from surface coal mining of Federal coal deposits and to assist in the preparation of comprehensive land-use plans required by section 2(a) of the Mineral Lands Leasing Act of 1920, as amended, the Secretary shall consult with any surface owner whose land is proposed to be included in a leasing tract and shall ask the surface owner to state his preference for or against the offering of the deposit under his land for lease. The Secretary shall, in his discretion but to the maximum extent practicable, refrain from leasing coal deposits for development by methods other than underground mining techniques in those areas where a significant number of surface owners have stated a preference against the offering of the deposits for lease.

"Surface owner."

(e) For the purpose of this section the term "surface owner" means the natural person or persons (or corporation, the majority stock of which is held by a person or persons who meet the other requirements of this section) who—

(1) hold legal or equitable title to the land surface;

(2) have their principal place of residence on the land; or personally conduct farming or ranching operations upon a farm or ranch unit to be affected by surface coal mining operations; or receive directly a significant portion of their income, if any, from such farming or ranching operations; and

(3) have met the conditions of paragraphs (1) and (2) for a period of at least three years prior to the granting of the consent.

In computing the three-year period the Secretary may include periods during which title was owned by a relative of such person by blood or marriage during which period such relative would have met the requirements of this subsection.

(f) This section shall not apply to Indian lands.

(g) Nothing in this section shall be construed as increasing or diminishing any property rights by the United States or by any other landowner.

APPENDIX F
SURFACE OWNER CONSULTATION STATISTICS

	DEPOSITS				
	Hanks	Sand Creek	Williston	Tobacco Garden	Bennie Peer
I. GENERAL INFORMATION					
Number of surface owners over federal coal	175	263	303	60	33
Number of surface owners who responded to survey	115	140	141	28	20
Percentage of total	66%	53%	47%	47%	61%
II. OWNERS OPPOSED TO FEDERAL COAL LEASING (that would lead to mining coal under their lands)	Number	Number	Number	Number	Number
Part or all of surface not leased for mining	61	71	61	12	16
III. OWNERS OPPOSED BUT SURFACE LEASED FOR MINING[1]	13	18	23	0	0
IV. OWNERS IN FAVOR OF FEDERAL COAL LEASING					
Part of all surface not leased for mining	3	6	15	2	1
Surface leased for mining	7	12	15	0	0
V. SPLIT PREFERENCE					
Leased	1	1	0	0	0
Not leased	0	0	0	2	0
VI. OWNERS RESPONDED BUT WERE UNDECIDED OR DID NOT STATE PREFERENCE					
Part of all surface not leased for mining	22	19	15	10	2
Surface leased for mining	6	11	11	2	0
Split preference leased	1	0	0	0	0
Split preference part leased	2	0	0	0	0
VII. OWNERS FAILED TO RESPOND, NOT CONTACTED, OR NOT QUALIFIED[2]					
Owners could not be contacted or did not respond	60	122	162	32	13
Owners not qualified	0	1	1	0	1

[1]In situations where all of a surface owner's land over federal coal has been leased for mining, the surface owner cannot be counted as opposed, even if he has expressed opposition to mining (43 CFR 3420.2-3]e[ ]2[).

[2]Surface owners who are obviously not qualified according to Public Law 95-87 (see Appendix E). No comprehensive effort was made to determine whether or not surface owners were qualified.

NOTE: The private surface lease—between a landowner and a coal company—should not be confused with a federal coal lease. Where the federal government owns the coal, the surface owner cannot lease the coal. The surface lease for coal mining is a consent to allow mining, and it stipulates the amount of money to be paid to the surface owner. The federal coal lease, on the other hand, covers only the coal, and it stipulates the royalty to be paid to the federal government. Sometimes a surface lease (for coal mining) is called a "coal lease," and the same form for leasing private coal or leasing the surface over federal coal may be used by industry.

APPENDIX G
LAND PATTERN REVIEW AND LAND ADJUSTMENTS[1]

The BLM has been concerned with the need for land adjustment for many years. The public land pattern in the McKenzie-Williams Planning Area is fragmented, with approximately 3,280 acres existing in a scattered pattern of relatively small tracts, ranging in size from 40 to 160 acres.

The BLM is authorized to enter into land adjustments through the Federal Land Policy and Management Act of 1976 (FLPMA) and other public land laws. The principle also applies to adjustments in the mineral estate of lands, particularly where there is a split-estate situation with federally owned mineral estate and privately owned surface, or vice versa.

Major types of land adjustment conceming the BLM in the planning area are:

1. BLM/Forest Service jurisdictional transfer
2. State Exchange
3. Complex Multi-party Exchanges
4. Regular Private Exchange
5. Acquisition
6. Public Sale
7. Community Expansion
8. Withdrawals
9. Mineral Exchanges

In utilizing the mechanisms for land adjustment, the BLM should be especially concerned with improving land usage by the public, and improving management of public values and resources by the managing agency. This involves more than simply blocking up the land pattern and disposing of isolated parcels. The Bureau's adjustment decisions will be made after thorough analysis and study of land use potential, including the following long-term objectives for management.

Objectives

1. Identify and transfer those public lands which could attain a higher and better use in the private sector or if managed by another public agency.

2. Retain those public lands with identified public values; acquire (primarily by exchange) other lands critical to public land management objectives.

3. Adjust the BLM land pattern to get the most public value for the money invested.

4. Continue ongoing land adjustment projects, including in-lieu selections, state and other exchanges, BLM/FS jurisdictional study, etc.

5. Full disclosure and public review and involvement would be accomplished under the requirements of FLPMA, NEPA, and other related legislation.

6. Identify and adjust lands where that adjustment will satisfy the objectives of both the public and private sectors.

Public lands have been identified in three broad categories—Disposal (sale, transfer or exchange), Retention, and Further Study—to provide for the implementation of the long-term adjustment program. The proposed program has four phases: (1) Develop criteria for categorization of public land. (2) Delineate present public lands into the three general categories. (3) Plan amendments and environmental analyses will be done on the categories. (These documents will be subject to public review, and a call for interest in exchanges or sales will be issued.) (4) Identify priority areas to begin sale or other disposals in 1984 and continuing.

This program is designed to meet FLPMA and NEPA requirements, and to use present BLM land use planning mechanisms effectively in reaching land adjustment decisions. The overall goal of the program is to improve public land management through a variety of methods, including sale, exchange, or other methods of transfer.

Land Pattern Review Criteria

The public lands subject to these criteria are those lands, minerals, or interests in land administered by BLM. Criteria are used in categorizing the public lands for retention, disposal, or further study. Criteria are also provided to facilitate the selection of lands to be received in exchanges or other types of acquisition. The criteria are designed to provide the manager flexibility in identifying circumstances which dictate the category in which lands can be placed.

A. *Retention*—These are lands which will remain in public ownership and be managed by BLM. BLM is interested in exchanges to improve manageability of areas with important public values. Although the underlying philosophy is long-term public ownership, minor adjustments involving sales and exchanges of lands may occur when the public interest is better served.

1. Wetlands and riparian areas under Executive Order 11990.

2. Areas of national economic significance including, but not limited to:

   a. Designated Mineral Resource Areas where disposal of the surface would unnecessarily interfere with the logical development of the mineral estate, e.g., surface minerals, coal, phosphate, known geologic structures, etc.

3. Areas where management is cost-effective or lands containing other important characteristics and public values which can best be managed in public ownership by BLM, including but not limited to:

   a. strategic tracts along rivers, streams, lakes, ponds, springs, and trails;

[1]This is an edited version of State Director Guidance that has specific application to North Dakota.

b. important hunting or fishing areas;

c. recreation sites and areas.

4. Lands with a combination of broad multiple-use values which dictate they should be retained in public ownership and managed by BLM.

5. Areas where future plans will lead to further consolidation and improvement of land patterns and reduce the costs of management.

6. Public lands withdrawn by the BLM or other federal agency for which the purpose of the withdrawal remains valid and the resource uses can be managed by BLM concurrently.

7. Public lands which provide public access and contain previously mentioned public values which, when considered together, warrant their retention.

B. *Disposal*—These are lands identified for potential removal from public ownership through sale or exchange, or through transfer to federal, state, county or local public entities. In addition to land internally identified for disposal, BLM will respond to proposals from the public. Disposal decisions will be made in the public interest based upon the following criteria:

1. Lands specifically identified through land use plans for sale, exchange, transfer or Recreation and Public Purposes Act applications.

2. Lands of limited public value.

3. Widely scattered parcels which are difficult for BLM to manage with anything beyond minimal custodial administration.

4. Lands with high public values proper for management by other federal agencies, or state or local government. Incorporate, when applicable, the objectives of the Interior Secretary's Good Neighbor Policy.[2]

5. Lands which will serve important public objectives (such as community expansion) as provided in the Federal Land Policy and Management Act (FLPMA) Sec. 203(a)(3).

6. Lands where disposal would aid in aggregating or repositioning other public lands or public land resource values in retention areas to facilitate national, state, and local objectives.

7. Lands with long-term unauthorized use problems, and which are not required for specific public purposes.

8. Lands where disposal would increase the range of economic opportunities provided to the general public.

9. Lands in which the highest value or most appropriate long-term use is agriculture, or commerical or industrial development.

10. Lands involved in BLM/FS jurisdictional transfer, state indemnity selections and ongoing exchanges.

C. *Further Study*—Lands that fail to clearly meet either retention or disposal criteria will be subject to further study. Lands in this category will include:

1. Lands where disposition would pose questions as to consistency with other federal, state, local government or tribal land use plans.

2. Lands under withdrawal review.

3. Lands where less than full fee conveyance would reserve specifically identified significant public values to protect public interest.

4. Lands where management is not cost-effective, but not clearly negative, and where multiple-use values are marginal.

5. Lands where cooperative management best serves the public interest.

6. Lands with potential for future public use—based on developing needs.

7. Lands with potential for transfer under the Good Neighbor program.

8. Lands in areas of public access deficiencies.

D. *Selection Criteria*—Used to evaluate proposals which would result in the transfer of lands or minerals to the Bureau of Land Management through exchange or other transactions.

These criteria help to assure that any BLM decision to acquire a tract of land provides signficant public benefits. The criteria range from "general" standards, against which to evaluate all proposals, to "specific" guidelines covering the selected or prioritized program areas.

These standards are designed to provide consistent direction, while allowing the line manager flexibility to meet local, state, and national needs.

General Criteria

All proposals will be evaluated to determine if the selected lands would:

1. Facilitate access to areas retained for long-term public use.

2. Enhance Congressionally designated areas, rivers, or trails.

3. Be in or near "retention" areas. Acquisition in "Further Study" areas or "disposal" areas will ony be considered if the action leads to and/or facilitates long-term needs or program objectives.

4. Facilitate national, state and local BLM priorities or mission statement needs.

[2]The Secretary's program invites state governors to participate in the nomination of federal lands needed by state and local governments and to expedite their transfer under the Recreation and Public Purposes Act.

5. Facilitate implementation and/or be consistent with BLM land use and activity plans.

6. Stabilize or enhance local economies or values.

7. Meet long-term public land management goals, as opposed to short-term goals.

8. Be of sufficient size to improve use of adjoining public lands or, if isolated, large enough in scale to allow the identified potential public land use.

9. Allow more diverse use, more intensive use, or a change in uses to better fulfill the Bureau's mission.

10. Maintain or enhance important and recognized public land values. Especially noteworthy are identified, designated, special, or high interest value areas.

11. Enhance the opportunity for new or emerging public land uses or values.

12. Contribute to a wide spectrum of uses or a large number of public land users.

13. Facilitate management practices, uses, scale of operations or degrees of management intensity that are viable under economic program efficiency standards.

14. Secure for the public significant water-related land interests. These interests will include lake shore, river front, stream, pond, or spring sites.

GLOSSARY

ACTIVITY PLANNING—Site-specific planning which precedes actual development. This is the most detailed level of BLM planning.

ALLUVIAL VALLEY FLOORS—The definition of this phrase as used for surface mining control and reclamation as stated in Public Law 95-87, August 3, 1977 [Sec. 701(1)] is:

"Alluvial valley floors" means the unconsolidated stream land deposits holding streams where water availability is sufficient for subirrigation or flood irrigation agricultural activities but does not include upland areas which are generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from sheet erosion, deposits by unconcentrated runoff or slope wash, together with talus, other mass movement accumulation and windblown deposits.

AQUIFER—A rock formation, group of rock formations or part of a rock formation that contains enough water-saturated permeable material to yield water to a spring or well.

FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 (FLPMA)—Public Law 94-579. October 21, 1976, often referred to as the BLM's "Organic Act," which provides the majority of the BLM's legislated authority, direction, policy and basic management guidance.

HABITAT—A specific set of physical conditions that surround a species, group of species or a large community. In wildlife management, the major constituents of habitat are considered to be food, water, cover and living space.

MITIGATION MEASURES—Methods or procedures committed to by BLM for the purpose of reducing or lessening the impacts of an action.

MULTIPLE USE—Balanced management of the various surface and subsurface resources, with permanent impairment of the productivity of the land, that will best meet present and future needs.

RECREATION AND PUBLIC PURPOSES ACT (R&PP ACT)—This act authorizes the Secretary of the Interior to lease or convey public lands for recreational and public purposes under specified conditions of states or their political subdivisions, and to nonprofit corporations and associations.

STATE DIRECTOR GUIDANCE—This document, published in April 1983, provides direction and policy interpretations for BLM personnel in Montana and the Dakotas. It also defines the major BLM planning goals, priorities and constraints within the 3-state area. The document is available to the public upon request.

SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977 (SMCRA)—Public Law 95-87, August 3, 1977—This law provides for: (1) surface coal mining using methods which will protect the environment and the rights of surface owners over Federally reserved coal; (2) reclamation of mined land as contemporaneously as possible with mining operations; (3) reclamation of previously abandoned mine areas.

UNIT RESOURCE ANALYSIS (URA)—A comprehensive display of physical resource data and an analysis of the current use, production, condition and trend of the resources and the potentials and opportunities within a planning unit, including a profile of ecological values.

WATERSHED—All lands which are enclosed by a continuous hydrologic drainage divide and lie upslope from a specified point on a stream.

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CANADA

Scale 1:1 000 000
1 inch equals approxrmately 16 miles
Lambert conformal conic projection
Standard parallels 33° and 45°

McKENZIE-WILLIAMS

GOLDEN VALLEY

NORTH DAKOTA

WEST-CENTRAL

SOUTHWEST

BLM PLANNING AREAS

LEGEND

- BLM Planning Areas
- Coal Deposits
- Existing Coal Tracts

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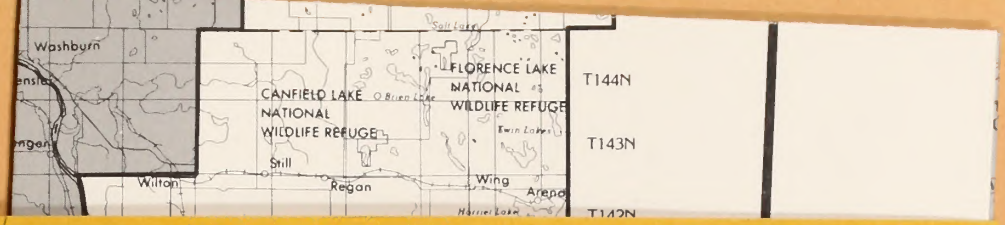
Washburn
CANFIELD LAKE
NATIONAL
WILDLIFE REFUGE
FLORENCE LAKE
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T144N
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Still
Wilton
Regan
Wing
T142N